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MUCO-MEMBRANOUS COLITIS IN CHILDREN (MUCOUS DISEASE, EUSTACE SMITH'S DISEASE), WITH REPORT OF TWO CASES.

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I.

In the study of muco-membranous colitis in children the first striking singularity that presents itself is the scanty recognition which this disorder has received from writers on pediatrics. Very few of the modern text-books on diseases of children give any space to it; some not even giving it a mention. Keating's Cyclopedica, the American text-book, and Taylor and Wells are the only works which, to my knowledge, reserve a special section for the consideration of this subject. Even these articles treat the disease more particularly on the authority of Eustace Smith. It is evident that very few typical cases have been reported since this author described the affection. Many recent writers ignore the subject entirely, having never seen a case which they believed should be separately classified from other forms of chronic follicular colitis.

The assumption, then, is justified that at present our knowledge of mucous disease is enveloped somewhat in obscurity and contradictions.

In order to clarify this subject to some extent, a brief study of the literature will be analyzed.

Eustace Smith¹ was the first to describe an affection of childhood under the name of mucous disease. Contrary to the opinion of all later writers, he regarded this disease as frequent among children. He claimed that it occurred between the ages of three and twelve years, and that pathologically it was a mucous flux. The little patient becomes languid, dull and disinclined to exertion. The child is depressed and declares that he is tired and weary. He ceases to take an interest in his common amusements, is irritable and has frequent crying paroxysms. It is noticed that the patient is pale, and is beginning to lose in flesh, although emaciation is never extreme. Drowsiness in day time is succeeded by wakefulness and restlessness at night. The child grinds his teeth and has night cries. The appetite is capricious. The tongue is flabby, indented at the edges by the teeth and covered by a very characteristic coat. This is a shiny, glossy white coat, and is produced by the excessive secretion of mucus in the mouth. The most singular symptoms are referable to the intestines. The child is usually constipated, or there are frequent scanty stools containing large quantities of free mucus. The hardened scybalæ are often coated with a membrane of mucus. Mucous shreds, strings, and casts of the bowel may be passed. Occasionally the constipation and

diarrhea alternate. After two or three weeks of obstipation, diarrhea supervenes accompanied by griping pains and the passage of enormous quantities of mucus. The patient complains of headache, pain in the chest or stomach, but most frequently colicky pains in the abdomen. There is no elevation of temperature, and the disease is very intractable.

Such, in brief, is the picture of this disease as described by Eustace Smith. In searching the literature, cases which resemble this clinical picture are given under the name of membranous colitis or mucous colitis.

It should be remembered, however, that the clinical picture which Smith has drawn is by no means sharply defined. Cases of chronic entero-colitis, chronic dysentery and even constipation may be included under that heading.

Several forms of membranous diarrhea have been reported which must be excluded from this category. Thus, Fruitnight² reported a case of scurvy in a child. The patient was very constipated, and after a movement was procured a cast of the bowel was passed. This was red in color and contained fibrin and red blood corpuscles. It was probably due to hemorrhage into the bowel, as sometimes happens in scurvy.

Holt³ describes an acute membranous ileocolitis occurring among children, which differs materially from that seen in adults, or from Eustace Smith's disease. This affection usually runs a short course, and is associated with severe general symptoms—fever, prostration. It is fatal, as a rule, in eight or ten days, and when recovery follows it is only after a protracted illness. The gross and microscopic appearances are also utterly different from mucous colitis.

Douglas⁴ gives the histories of three cases occurring in infants. These were probably due to some infective agent and cannot be classed with the disease under consideration.

These cases demonstrate that infective and secondary forms of membranous enteritis may occur, and in all cases of mucous colitis it is necessary to bear these special varieties in mind.

The actual number of cases of muco-membranous enteritis reported in children are so few that it is almost impossible to draw any definite conclusions from them.

Edwards,⁵ in an excellent article, refers to several cases which have been reported as occurring in children. He refers to cases reported by Chapin,⁶ others by Smith,⁷ Clemens,⁸ and Whitehead.⁹

Fields¹⁰ referred to several cases which have been placed on record.

Westphalen,¹¹ in an extensive study of mucous colitis and membranous enteritis, only refers to the rare cases as they occur in children. He mentions cases reported by Longuet, Ulman,¹² and Lowenstein.¹³

Finally, Koplik¹⁴ discusses this subject; at the same time he lays stress on the fact that the disease is overlooked and that it is very intractable in treatment. He also briefly reports two or three cases.

Now, this seems to be about the whole number which I have been able to glean in the literature accessible to me. Apparently, then, it is a rare disease. This contrasts very strikingly with Eustace Smith's statement that it is a frequent disorder. No doubt, practitioners overlook these cases. The most prominent symptom is the constipation, and such is the usual diagnosis. When more or less looseness of the bowels is present the diagnosis of chronic dysentery or chronic diarrhea will be made.

Two cases have been under my care in the last year, a short report of which is hereby given. These cases show individual peculiarities, and while the first was an undoubted case of mucous colitis, there is some question as to the latter.

CASE 1.—In June, 1901, I was consulted by a mother in regard to her daughter, four years of age. It was stated that the patient suffered from persistent constipation.

The mother lived in a country town. Both parents are healthy. The patient is the only child. She was nursed until about eight months old, and then given cow's milk and later given a general but judicious diet. She had several attacks of diarrhea during the second year of her life, and following this had been more and more constipated. She was treated by several physicians. A carefully regulated diet had been prescribed. A great many different kinds of laxatives and purgatives had been given, but with only temporary benefit. Following the administration of the purgatives she not infrequently had diarrhea. At times when the mother would not use measures to produce an evacuation, she would have attacks of illness which the mother described as "bilious" attacks. She rarely had fever.

Examination of the patient disclosed little that threw any light on the cause of the constipation. The child was well nourished, looked bright, vivacious, and was very active in her movements. No abnormality was found in chest. The abdomen was not distended and not tender. The liver and spleen were perfectly normal in size. No dilatation of the stomach or intestines could be discovered.

The child was first seen in my office, and I asked the mother to give the patient a laxative that night and an enema in the morning. Then she should save the stool, and I would call at her temporary residence and examine it.

Examination of the stool revealed the disease under consideration. A very large fecal movement mixed with water was found. The feces were composed of hard, scybalous masses, and nearly all coated with a grayish-white, semi-transparent membrane. Large masses of mucus were also present. The membrane, while retaining its shape, could be easily torn.

Diagnosis.—Eustace Smith's mucous disease.

I was aware that the prognosis in these cases is usually given as very uncertain. In fact, Koplik, in his recent article, states that he has "not succeeded in completely curing the main condition at fault in these cases." The condition has been said to be very similar, if not identical, to the chronic membranous enteritis in adults, which, as is well known, is very resistant to therapeutic measures.

In regard to the diet, I ordered an exclusion of fats and cereals. In fact, gave a light diet which contained no indigestible residues. I treated the case just contrary to the rules given for constipation. The food consisted of skimmed milk, egg, meat broths of all kinds, fish, and soups. The only cereal allowed was stale bread.

I first adopted the alkaline treatment of Eustace Smith, by giving large doses of bicarbonate of soda, but added papoid. For the constipation small cold water enemata were ordered. No laxative was given by the mouth except the soda.

After two weeks there was marked improvement, but still not all that could be desired. Constipation persisted.

The acid treatment was then employed. Dilute sulphuric acid and fluid extract of hydrastis were given for two weeks. While all this greatly ameliorated the condition the cure was incomplete. The odor of the breath was still offensive, and the bowels constipated.

Then I concluded to try arsenic, since this drug had been highly recommended in the membranous colitis of adults.

Fowler's solution in gradually increasing doses was prescribed. The cold water enemata were used daily.

From this time improvement was uninterrupted. In six weeks the tongue was clean, the breath sweet, no mucus was found in the stools. A normal

passage from the bowels was obtained daily without artificial aid. The child seemed cured, and in three months there has been no relapse as far as I know. The mother was directed to administer the arsenic at intervals during the next year.

CASE 2.—L. R., male, aged seven months; was first seen in September, 1900. The patient had been breast-fed during the first few months, then fed at the table, receiving a mixed diet. He had always been healthy except an attack of influenza. In August he was ill with a severe diarrhea which persisted more or less for several weeks. During this time several exacerbations of the disorder occurred, at one of which the mother brought him to the St. John's Dispensary.

Examination revealed a child fairly well nourished, having a slight fever, and, the mother stated, passing numerous slimy stools daily. The patient presented a typical *lingua geographica*, which persists to this day.

The provisional diagnosis of acute follicular colitis was made and treatment instituted.

Some improvement followed; the child gained in weight, looked well, slept well, but slight looseness of the bowels persisted and defied all remedies. The mother came to the clinic regularly; at each visit she reported that he had about two movements daily, but "so much slime."

In fact, this was the constant complaint, "so much slime." Otherwise, the symptoms fitted the picture drawn by E. Smith. The countenance at the beginning was dusky, the child listless, very nervous in disposition, restless at night, and coated tongue; pain was never pronounced.

For one whole year this child was under treatment. All kinds of remedies were given. Alkalies, acids, digestants and tonics, but the mucus in the stools persisted. Arsenic, also, was administered for a short time.

After a year an improvement was manifested, and to-day he is practically well.

During this year's treatment he had several intercurrent affections, among which tonsilitis, bronchitis, and diphtheria may be mentioned.

II.

Another phase of this study presents itself, and that is the relation of Eustace Smith's diseases to the membranous enteritis of adults. The tenor of some writings on the subject certainly leaves the impression that these diseases are not identical. A comparison of the clinical characters of the mucous colitis of childhood and that of adult life might, therefore, be instructive.

In the first place, it should be remembered that clinicians, following Nothnagel's classification, have attempted to establish two forms of the affection in adults. These varieties were designated by Nothnagel as *colica mucosa* and *enteritis membranacea*. At the Thirteenth International Medical Congress,¹⁵ this subject was discussed by the world's eminent authorities. It is evident from reading the discussion that considerable confusion about this affection existed in the minds of these scientists. Thus Boas insisted that Nothnagel's classification was correct, although his statement relative the clinical characters of the two varieties is by no means clear.

Mannaberg also argued that the two forms must be sharply distinguished. He declared that *colica mucosa* was a very rare affection, in which a paroxysm of severe colic was relieved by the discharge of a large quantity of mucus from the bowel. He claimed that *enteritis membranacea* was an ordinary catarrh, while the mucous form was a neurosis dependent on hysteria and neurasthenia.

Mathieu gave both forms the name of muco-membranous colitis that were caused by obstipation in neurasthenia and hysterical individuals.

Langenberg distinguished two forms—one accompanied by obstipation, the other by diarrhea.

Ewald insisted that excepting certain secondary varieties, the two forms are probably the same disease.

It gives some feeling of relief to study the article by Westphalen (*loc. cit.*), who discusses the question in an unanswerable way and reports several cases. His conclusions are that the same disease is represented by the terms enteritis membranacea and colica mucosa; in the latter, however, a sensory neurosis is added to the secretory disturbance, as was suggested by Rosenheim. In the former disorder, atonic obstipation, and in the latter spastic obstipation are the prevailing conditions.

I shall regard the affection as one disease having a certain variation in the symptoms. The principal clinical symptoms which admit a comparison are as follows:

1. Constipation.
2. Moderate nutritive disturbance.
3. The passage of mucus, casts, masses and shreds from the bowels.
4. Irregular abdominal pains.
5. Normal temperature.
6. Neurasthenic symptoms.
7. Chronicity and intractability.

A comparison of these characteristics in the adult with those laid down by Eustace Smith, shows that the symptoms collected by the latter are more diversified. But if the clinical signs are carefully classified, the secondary forms of chronic colitis being rejected, as Edwards¹⁶ was compelled to do, a group of symptoms remains which resembles that found in muco-membranous enteritis. The resemblance in the constipation, state of the nutrition, the discharge of mucus, varying abdominal pains, and normal temperature is striking. There are differences, however, though these may be explicable on the ground of the patient's age.

In the first place, while a nervous irritability is common, the symptoms referable to the nervous system are not such that could be designated neurasthenia. At least it would be very difficult to separate the accompanying nervous symptoms from others associated with the common digestive disorders of childhood. Yet, hysteria and neurasthenia are not unknown at this age, and, possibly, in the future a more careful study of the nervous system may bring out some typical signs of the neurosis.

The rarity of neuroses in general at this age may account for the rarity of the affection, but it must not be considered as proven that the pathology of the disease is understood. To designate such an affection as a secretory neurosis does not solve the difficulty.

Another difference is that the disease yields to treatment much more easily in childhood. Koplik, however, has not been very successful. My own case rapidly recovered. At a meeting of the Bethesda Pediatric Society, when this subject was under discussion, Dr. Blair reported that he had cured two cases by the repeated administration of castor oil. E. Smith, also, gives rather a hopeful view of the prognosis.

Altogether, then, the disorder in childhood must be considered identical with that occurring in adults. It has a similar course, shows itself by similar symp-

toms, and probably depends on the same cause. It should, therefore be termed *muco-membranous colitis*, and the name *mucous disease* should be dropped.

III.

It is hardly necessary to review the many different forms of therapeutic measures that have been offered to overcome this disease. Articles by Thompson¹⁷ and Einhorn¹⁸ deserve reading in this connection.

The dietary regulations are by no means free from contradictory phases. Some authorities hold that bland, unirritating food should be prescribed. Foods containing cellulose and woody fibers should be rejected. All food must be liquid and free from particles. It was argued that undigested residues would irritate the mucous membrane, and consequently increase the mucus. Smith reasoned in this way and, therefore, rejected all farinaceous food.

Von Noorden,¹⁹ on the other hand, declared that a fluid diet is unsuitable; to overcome the constipation a coarse diet should be ordered. Substances containing much cellulose and woody fibers are the proper foods. It would seem, then, that the question of the diet is by no means settled, and each individual case may receive several kinds of diet before a cure is effected.

In regard to medication, nothing specific can be offered. Above all beneficial drugs, castor oil is very conspicuous. It should be given in small doses daily. In my own case, arsenic did the most good, and we find that this drug is recommended by various authorities. The alkaline treatment which Smith recommended did not gather much support. Thompson advocated the administration of nitrate of silver combined with turpentine. Other clinicians have urged the use of intestinal antiseptics and vegetable digestants. Nervines occupy a prominent part in the treatment of this disease, since it is supposed that the primary morbid process is in the nerves.

Most clinicians lay particular stress on rectal injections. All kinds of solutions have been tried. At present the treatment suggested by Kussmaul and Fleiner is generally followed. This is the rectal injections of large quantities of oil. The oil is injected high up into the sigmoid and retained as long as possible.

Of course, general hygienic measures must always be carefully observed.

Conclusions:

1. Muco-membranous colitis is a rare disease in children.
2. There is no evidence that a special disease exists in children excepting muco-membranous colitis, to which the name mucous disease may be applied.
3. The pathologic process and clinical history is similar in children and adults.
4. The term mucous disease should be dropped.

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REVIEW OF THE PATHOLOGIC ANATOMY OF
AMEBIC DYSENTERY.

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Before entering into a description of the pathologic changes occurring in the course of the so-called amebic dysentery, it may be well to call attention to the fact that in this disease we have to deal with a symptom-complex that in its pathologic features stands alone and distinctly differentiated from all of the other inflammatory and ulcerative affections of the intestinal tract; its complications, too, are singular and very peculiar. I have to make this statement on account of the as yet not generally agreed upon etiology of the disease. While a superficial glance at the literature published since Lambl first saw the amebæ in dysenteric stools in 1860, would seem sufficient to assure the conviction of these amebæ as the causative agent, to the careful critic a great number of evidences are as yet not established to make such an inference conclusive. It is true that wherever amebæ are found in dysenteric stools they go hand in hand with a well-defined pathologic change; it is true that this pathologic change has never been observed in the absence of amebæ. We know, furthermore, that dysenteric symptoms and lesions can be produced in animals by the administration of material in which there are contained amebæ. But this material is not a pure culture; since Kartulis claimed to have produced dysentery in rats with pure cultures of amebæ, nobody has been able to duplicate this experiment. Kruse and Pasquale had bacteria in their cultures, and all of the modern amebologists tell us that it is impossible to cultivate amebæ without the presence of bacteria. The experiments made with the fluid from hepatic abscesses, that are mostly sterile as far as the bacteria are concerned, cannot clinch the evidence either, since they are artificially contaminated with a host of organisms, from a definite knowledge of which we are still far, the intestinal bacterial flora. Attempts to produce lesions in sterile organs by this material have not been made. Above all, however, it is our absolute inadequacy of finding the way in which such protozoic organisms can act on the living tissues of the body. The chemistry of their metabolism is a complete *terra incognita*, in contradistinction to bacteria and several other micro-organisms. We know not even much about the common biologic features of these beings, and, altogether aside from their specification, we do not even know the most essential phases of their development. It is very probable that amebæ are taken in from surface water, but there is not a single absolute proof that they have been found in a suspected water, not even in the assumed form of cysts. Since amebæ have been repeatedly found in normal intestines, we may just as well assume that they are more or less habitues of our intestines and only assert themselves under certain conditions.

By all means, all attempts at classification of the amebæ have been up-to-date unsuccessful. All that we really know is that these amebæ are always present in a certain form of dysentery, and that they always can be found in definite relations to the pathologically changed tissues. But Koch has taught us that this is not sufficient to establish their etiologic quality, just as little as the etiologic cause of variola is established by the continuous presence of degenerated cells and hyaline bodies in the vaccine, that some enthusiastic observers have thought resembled some forms of protozoa. If this careful hesitation, generally observed

by science to-day, in accepting openly the amebic as the etiologic factor of stromic dysentery is highly to be praised, it cannot be denied that on the other side the circumstantial evidence is such as to leave little doubt that finally this disease will be pronounced of amebic origin. Aside from the above observations, especially the pathologic investigations of it have given great strength to this belief, and in this line we are indebted to the classic work of Councilman.

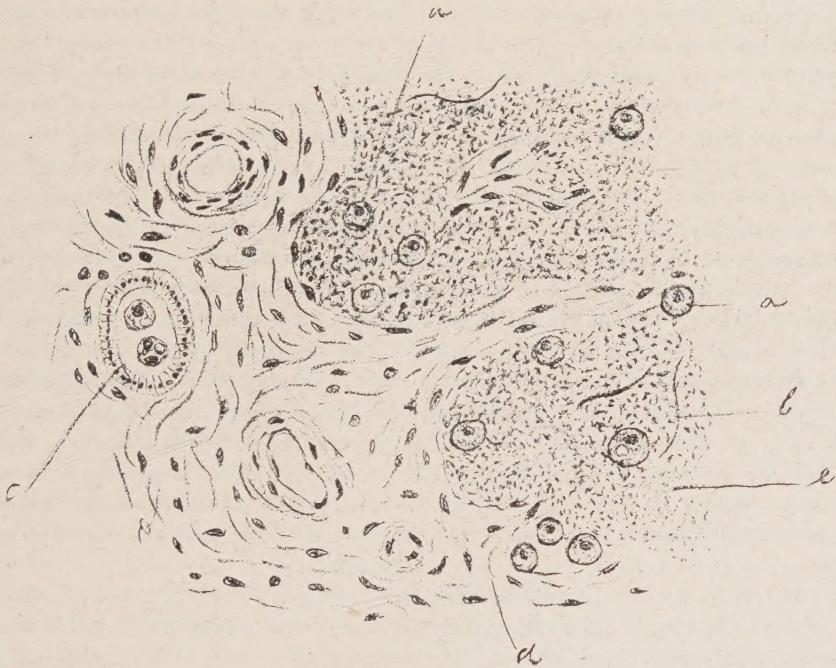
According to the different forms of amebic dysentery (of moderate intensity, gangrenous and chronic), the symptoms vary greatly. In general quite a considerable degree of secondary anemia is produced, and a depression of the metabolism below par. The temperature is usually not above normal, pulse about normal, and respiration not increased. Abdominal pains are very frequent. The stools are usually loose and vary in number, size and quality, are always of alkaline reaction and contain much mucus, together with blood, sometimes pus and large masses of peculiarly swollen epithelial and other cells. In the ulcerative or gangrenous forms, larger and smaller sloughs appear. Amebæ are always found. The urine is mostly normal. The duration of the disease varies between several weeks and years. As complications may be mentioned hepatic abscess, peritonitis, and hemorrhage from the intestine. The prognosis is always grave.

The lesions of the intestines found at autopsy are very characteristic. They are almost always limited to the colon, and only in one case of our series did they extend about six inches above the ileo-cecal valve. The portions involved vary greatly in size and location, sometimes the whole length being affected, while at others only a part showed lesions. It has seemed to me that the rectum and the ascending colon, and next the descending colon, are the most frequent places of ulceration, while the transverse colon was less implicated. Usually, the process stopped short at the ileo-cecal valve.

Macroscopically, the colon appeared in some places much thicker than normal, and when split showed on its mucosal surface a large number of round or irregular nodules, sometimes of considerable size. Everywhere smaller or larger ulcers were seen, the smaller ones, as a rule, running transversely, while the larger were of very irregular outline. The ulcers are covered with a mucous material, and very often with black pigment. Almost always in some ulcers hemorrhagic areas were present. Only in one case macroscopically, some ulcers were found filled with pus. In advanced cases through these changes the normal modeling of the mucosa is altogether obliterated; ulcer adjoins ulcer. The border of the ulcers appeared deeply undermined and their floor is uneven and ragged. The thickness of the bowel-wall under the ulcer varies greatly; in the smaller ulcers it is usually very thin, while in the larger ones it often reaches the thickness of three or four mm. If thus the macroscopical picture is quite well differentiated from other enteric lesions, the microscopic examination reveals a very peculiar process. It would lead here too far to describe the changes in the single formations separately, and I shall instead try to present shortly to you the development of the process.

The mucosa away from the ulcer is little changed, it shows some infiltration and excessive mucous formation by its glandular structures. Some of the latter show often a cystic dilatation, and are filled with mucus, leucocytes and amebæ. It seems to Councilman that these changes are the initial stage of ulcer formation. The submucous tissue is very much swollen and of a gelatinous appearance. Its fibrillar structure is lost. I have never seen ulcers in

the mucosa alone; the smallest I found always involved the submucosa, and this involvement of the submucous tissue is the most characteristic feature of the process. There is a marked proliferation in this tissue with the formation of an enormous number of mast-cells, but all of these cells are widely separated from each other by a homogeneous clear interstitial substance. Amebæ are found in large numbers. Gradually in the center of this submucous focus breaking down begins, leading to obstruction of the vessels and capillaries coming to the muscularis and mucosa, and thus initiating the necrosis of the overlying structures. Very often the necrosis extends only to a small area, and then the ulcers open on the surface with a small, mostly round opening; the submucous necrosis can extend to great distance, so that on cross section we find a large ul-



- a. Amebæ.
- b. Elastic fibres in abscess contents.
- c. Small bronchus with two amebæ.
- d. Proliferated connective tissue.
- e. Contents of abscess.

ceration filled with gelatinous, rarely purulent, material, covered by the muscularis and communicating with the lumen of the bowel by the above described hole. In this way gradually, often very large areas become undermined, and finally sloughing of the roof begins. These are the sloughs voided with the feces. We see, therefore, that the dysenteric process asserts itself first most intensely in the submucous tissue. The finer histologic changes occurring during it are very interesting, but would necessitate too much detail. On successive sections, one can observe that the breaking down of the submucosa is not limited to the ulcer itself, but that channels of necrosis radiate from it in several directions communicating with neighboring ulcers. That the mucosa is not primarily most affected is beautifully shown by its hyperplastic growth, with

which it often outlines the overhanging edges of the ulcers and reflects itself on the lower surface of the undermined area.

While thus the submucous degeneration shapes out the size and form of the ulcer, the process does not stop here. From the floor of the ulcer, the gelatinous change enters the intermuscular layer of connective tissue, reaching there by pushing the muscle fibers of the muscularis wide apart, always closely followed by the amebæ. Especially at this stage the total absence of any inflammatory reaction in the ordinary sense is very remarkable. As soon as the intermuscular tissue is reached, the same proliferation and gelatinous degeneration begins that we have seen in the submucosa, leading here, too, to thrombosis of the vessels and to necrosis of the overlying muscular layer, the sloughs of which are so often found in the feces of this disease. Like in the submucosa, the dysenteric process often spreads extensively in the intermuscular tissue, thus leading to the formation of immense necrotic areas. It is unnecessary to repeat the similar changes that bring about the destruction of the longitudinal muscular fibers, thus involving the serous coat. In some cases the reaction of the serosa is slight, and then we have the fatal perforation. Mostly, however, the serosa responds to the direct attack by a remarkable hyperplasia of its tissue, so that not rarely the floor of the ulcers is formed by very thick masses of newly formed connective tissue. Owing to the often very extensive spreading of the ulceration in the serous coat, large parts of the intestines are changed into thick, leathery masses. Since the formation of these ulcers is confined more or less to the posterior part of the intestine, that means towards its mesenteric attachment, I have seen here in one case the ulceration spread into the mesocolon, which in turn, together with the wall of the colon, had formed a bulky mass of hard, glistening tissue. The follicles of the intestine are always only secondarily involved.

In the one case mentioned above, where part of the small intestine, too, was affected, the process was essentially the same, only that here the open ulcers were very small. Microscopic examination showed that here, too, an enormous undermining had taken place and that therefore these lesions were comparatively recent.

Aside from the very characteristic way of this ulcer formation there are other points that make the whole picture exceedingly singular. This is in the first place the almost entire absence of exudative processes in the ordinary meaning of the word. Of course, secondary infections with bacteria are bound to occur, and then in some cases we see the abscesses filled with pus and the surrounding tissue densely infiltrated. But as a whole, the process is entirely free from exudation, which is especially apparent in the so-called chronic cases. Bacteria naturally abound in the tissues, but they seem to take no part in the process, as we do not see any of the usual reactions occur. Amebæ are abundant everywhere, in the tissue, intestine, lymph vessels, blood vessels and at the margin of the ulcers, although it must be observed that they are not usually observed at the outposts of the process.

The next remarkable point is the peculiar proliferation of the connective tissue, that does not lead to the normal fibrous interstitial substance, but to a homogeneous, clear-looking, gelatinous material; in later stages this becomes edematous, and the cells are imbedded in it as pale, faintly staining structures. In other words, as Councilman has said, the tissues do not react by pus formation, but by proliferation, and it seems that the peculiar influence of the amebæ con-

sists in the reduction of this tissue into a viscid material. Perhaps a ferment action may be assumed here.

The proliferation of the peritoneum, of course, leads to adhesions of the viscera with adjoining organs or between the layers of the intestines themselves. The mesenteric glands were almost always considerably swollen, but showed only the usual hyperplasia.

Liver abscesses as complication occurred in two cases. In both there was an immense abscess near the anterior surface of the right lobe; in one there were found numerous smaller ones, in addition, throughout the whole liver. Always the contents of the abscesses were free from bacteria. The question how these abscesses originate has been much discussed. Councilman was in favor of the peritoneal route on account of the frequent location in the above mentioned position. It seems, however, more probable that the amebæ are carried to the liver by the blood, especially since in sections we so often find the amebæ in the vessels. The lymph-way may be excluded, since in not a single case have amebæ been found in the mesenterial glands.

The abscesses themselves hardly deserve the name of abscesses inasmuch as there is no exudation. Their contents consist of a fluid, granular material with a few disintegrated liver cells and shreds of connective tissue intermixed. Amebæ are present in great numbers, no bacteria. The wall of the abscesses had in our cases no distinct membrane, no zone of infiltration or granulation. From the study of small abscesses which could be viewed in their entirety, it appears that the abscess formation begins in the direct neighborhood of small portal branches around some amebæ lodged in these places in the capillaries. There the liver cells begin to degenerate, their nuclei lose their staining capacity, and the whole cell is changed into granular detritus. Gradually the surrounding liver cells become affected the same way, and the abscess increases in size. Characteristic is here again the behavior of the portal connective tissue, which shows pronounced proliferative multiplication and in the form of irregular, ragged processes protrudes into the necrotic mass. Here, too, the same homogeneous and edematous condition of the intercellular substance is seen, as in the intestine. The wall of the abscesses has always a ragged, irregular appearance, and shreds of the proliferated portal tissue often hang and float in the fluid as long, thin bands.

Besides the abscesses, the liver always showed small necrotic areas (even in those cases where no abscesses were found) that, however, have nothing directly to do with the amebic invasion, and have the same meaning as those well-known foci of necrosis found in other infectious or toxic diseases. They are sharply differentiated from the beginning abscesses by the round-cell infiltration that they always show.

In our cases there did not occur a direct extension of the liver involvement to the lung, which from other reports seems to be a rather frequent occurrence. Only in one case, the lower lobe of the left lung showed lesions, that to my knowledge have not been described before, which are of the utmost interest, since they demonstrate their independent origin and thereby the theory of dissemination of the disease through the circulation. They consisted of a number of small (size of a pea to that of a hazelnut) foci of softening in the lung tissue, about seven in number. On cross section, the larger ones contained a glairy, whitish

red material with shreds of necrotic tissue intermixed. Their wall was covered with a grumous, brownish substance and was irregular in outline and had a ragged surface. The smaller foci appeared on cross section firmer and consisted of blood and mucus. The microscopic examination showed in the first place plenty of amebæ, an intense interstitial thickening of the lung tissue around the foci, but no exudate in the alveoli. Towards the lumen the wall was formed by proliferated tissue with edematous interstitial substance; this tissue protruded into the central necrotic mass in several places as ridges and points. Elastic fibers could be demonstrated in the necrotic substance. Great numbers of streptococci, staphylococci and several forms of bacilli could be stained, but there was no pus and no fibrin. It was impossible to discover any connection or any relation to a bronchus.

Here it is sufficient to state that they exhibit principally the same characteristics as those found in the liver and intestine. They conform with the peculiarities found in hepato-pulmonary abscesses described by Councilman. The changes in other organs observed had only an indirect relation to the dysenteric process and varied much in individual cases. I shall not describe them here.

If we glance then over the picture described, we must admit that it is not only intensely peculiar, but that it is unique. It differs entirely from all of the dysenteric processes or intestinal ulcerations, and its histologic details are met with in no other pathologic process known to us. As I said in the beginning, it does not prove that the amebæ are the etiological agents, but it remains unexplained on any other conceivable basis.

I may add, here, that the lesions of bacillary dysentery have nothing in common with those described. I have studied them in one case that came to autopsy. Their bacillary character is evident and is in accord with our other experiences. In this case the bacillus of Shiga was isolated. I found the same bacillus in another case, one of amebic dysentery, in which it seemed to exist only as an accidental lodger. I conclude this from the following observation: The blood of a patient suffering from bacillary dysentery agglutinated promptly in high dilution the bacillus isolated from the patient's feces. This was not the case with the patient with amebic dysentery, where the specific bacillus and the blood serum did not react. That the latter bacillus was really the bacillus of Shiga was shown by the fact that it was agglutinated by the blood serum of the first patient. It seems, therefore, that in the future the differentiation between amebic and bacillary dysentery will be accomplished early by the agglutination of the bacilli.

THERAPEUTIC VALUE OF WORK IN HYSTERIA AND NEURASTHENIA.*

By SIDNEY I. SCHWAB, M. D., of St. Louis, Missouri.

In presenting this subject for your consideration, I am conscious that the force of what I have to say will depend more upon the truth and logic involved in the attempt to solve the problem, than upon a brilliant array of therapeutic successes. If there is any scientific worth in an idea or theory, its value is a constant thing and does not depend upon the number of experiments which may be devised for its proof. This is especially so in therapeutic experiments, and

* Read before the St. Louis Medical Society, March 8, 1902.

one success is as strong an evidence of its fundamental value as many, provided always that all conditions are known and all unusual ones taken into account. It is with this belief that I venture to discuss a method of treating a certain limited number of hysterical and neurasthenic individuals, by the application of principles based upon a fundamental necessity of all human beings and of all living things.

This principle is work in its broadest and most general meaning; useful work in its modified sense as a means of therapy. Professor Jacques Loeb, in his work on "The Comparative Physiology of the Brain," in discussing the theory of instincts, touches upon the subject of work in a most suggestive way, and his words might very well form the physiological basis of the application of this method to the class of abnormal individuals we are about to consider. He says: "Human happiness is based upon the possibility of a natural and harmonious satisfaction of the instincts. One of the most important instincts is usually not even recognized as such, namely, the instinct of workmanship. Lawyers, criminologists and physicians frequently imagine that only want makes man work. This is an erroneous view. We are instinctively forced to be active in the same way as ants and bees." A therapeutic method which contains so much physiological truth as this, must in the nature of things be logical and valuable. The work-cure then is merely an effort to apply in a practicable way a physiological law to a pathological condition.

In order to present the subject in as concise a way as possible, within the limits that are naturally imposed, I shall divide this paper into three parts. The first part will have to do with the review of the literature, with especial mention of the work of A. Grohman. The second with the psychological aspect of the question, and the limitations of the method. The third with the relation and discussion of a case of hysteria in which the method was used and where the therapeutic result was most striking.

The specific literature on work as a therapeutic agent is very small. In a careful review of the foreign and English contributions to this subject, I have been able to collect only some dozen or more papers in the last ten years. Even among this limited number, very few articles will be found which treat of the subject in a direct way, or give any but the most general and indefinite data in regard to it. For this reason the works of A. Grohman stand out in sharp contrast to the others, and deserve some comment even in as brief a paper as this. Grohman might well be considered to be the founder of the work-cure (*Beschaeftigungs-Therapie*), and every one who has attempted to use this method seriously must acknowledge his indebtedness to him. A few words in regard to the interesting personality of this man may not be amiss. It will surprise you to learn that Grohman is not a physician but an engineer; and it is a strange commentary on things that from a non-medical brain should have come a method of treating nervous diseases which is so practical that as great an authority as Moebius of Leipzig has called it the best that has ever come to his notice. This man then, according to his own words, was led from his former profession by taste and accident to a new one, the treating of nervously sick people by means of work, and he probably is to-day the one representative of this new specialty. With the aid and encouragement of Forel, Moebius, and others, he established in the neighborhood of Zurich a small institute, which he called a "*Beschaeftigungs Anstalt*" (a work establishment). Here the patients could be

treated by means of work carefully and judiciously selected for them. That Grohman was especially adapted to this sort of activity can be gathered from the words of Moebius in regard to him. He says that he unites in his person a rare combination of unusual qualities, great experience of men and things, rich technical knowledge and thoroughness, calmness and charity, and a healthy knowledge of men, with a fine, one might almost say an instinctive, understanding of pathological natures. So much for the man.

It was no new thing to give to patients shut up in insane asylums work to do. Most institutions the world over have recognized the necessity of affording some means of passing away the time to the people who are its inmates, but to Grohman must be given the credit of applying these same principles to a larger class of nervous patients and psychopaths, to whom work in its broadest sense had been a forbidden thing. In addition to this, Grohman had made it possible to carry out this therapeutic method, to a limited extent, it is true, outside of institutions in private practice. Grohman's chief contribution to the subject in a literary sense are two monographs and several articles. The two monographs were published in 1899; in one he describes his method and its results, with a description of his institution of work, and in the other he formulates a plan for an ideal communal establishment of this kind, where it will be possible for people of moderate means to enjoy its advantages. In a third article the main points from what may be called the psychological side of the question, as well as the method of selection used in determining the kind of work to be chosen, are considered. It might be said with justice that a great inspiration to labors of this kind may be found in a very remarkable, but in this country little known, monograph of Professor Moebius, of Leipzig, entitled "*Ueber die Behandlung von Nervenkranken und die Einrichtung von Nervenheilstaetten*" ("On the Treatment of Nervous Cases and the Erection of Institutions for the Same"). Too much cannot be said in praise of this stirring and suggestive pamphlet, mention of which is always found in papers which treat of the subject under review. The last work deserving of mention is an article by Henri Monnier, entitled "*Ueber die Behandlung von Nervenkranken und Psychopathen durch Nuetzliche Muskel-Beschaeftigung*" ("On the Treatment of Nervous Cases and Psychopaths by Means of Useful Manual Work"). This monograph is based upon observations made in Grohman's institute at the request of Professor For  l, and it gives, from a purely impersonal and objective point of view, the results which were there obtained. Its special value consists in the careful clinical treatment of the subject, which naturally is somewhat missing in the works of Grohman himself. Mention might be made of some of the other papers which have dealt with this subject, but as I have said before, with possibly one exception, they are not of great value.

The chief elements upon which For  l based his claim for the therapeutic value of work are as follows: The work from which this is selected is quoted in Monnier's work, published in 1894. (1) The well-known experience of alienists that work causes a remarkable improvement in cases of insanity, while idleness makes their condition worse. (2) The fact that the majority of nervously-sick people are so as the result, not of peripheral, but of central disturbances in their central nervous system, and that such disturbances are in the main functional in origin. Therefore, a therapy which has any hope of succeeding must

be based upon psychical consideration. (3) A case of hysteria which was absolutely cured by work.

It is necessary to define more closely what is meant by useful work in the sense that it is used in this paper, and to note upon what elements it has to depend for the hope of therapeutic results. By work is not meant the mere using up of muscular energy—as by exercise, gymnastics, physical culture, walking, etc., nor by various useless mechanical forms of employment which are so commonly recommended to nervous invalids, such as household matters, sewing, painting, musical training, etc. The attention and interest of the patient must be aroused, and no work can be useful in this sense until they are. The work must be useful to the patient as well as to others. This happens when some simple, manual, but interesting and varied useful work is devised, which cannot be pursued without a certain amount of mental concentration. In Grohman's institute various sorts of work are in daily use—gardening, carpentering, modeling, decorative art work of various kinds, drawing, etc. The striking thing is that each patient is given only that sort of thing to do which, after a careful study, is thought best suited to his own individuality. In this way the work becomes, in a sense at least, a physiologically applied therapeutic measure. The work itself is not the only factor in the case, but the patient must feel that what he is doing is useful and valuable and holds within itself the capacity of wider development and of general good. It can be seen perhaps from this brief description how many-sided such an activity may become, and how strongly it may direct the neurasthenic or hysterical patient's attention from the analysis of his own personal discomforts. It must be remembered also that in Grohman's institute other factors are at work in addition which cannot be counted upon in the case of a private patient treated at home. I refer especially to the discipline of a communal life, and the influence which a properly conducted company of people exerts upon each individual member. Grohman lays especial emphasis upon this community element of his establishment, and the purely democratic socialistic way in which it is conducted. Among other aids to the work-cure, Grohman mentions total abstinence from alcohol, the repression of various personal weaknesses, regularity and simplicity of living, the out-of-door life, the interest in the development of the theory itself, and many others which may be summed up conveniently under the term "the influence of the communal life."

Monnier's paper is based upon material of thirty-four cases, which include all the varieties of neuroses and psychoses, which may be found in any private institution for the treatment of nervous cases. A large proportion of the cases were hysterical or neurasthenic, in the broader sense of these terms. I can do no more than roughly quote his conclusions:

(1) By means of useful manual work hysteria and neurasthenia, in the narrowest sense of the term, can often be made to completely disappear. In cases of mental enfeeblement, psychopaths, alcoholics, according to the time of their existence and hereditary tendency, the influence of work is often very remarkable. (2) Hypochondriacs and paranoiacs are not especially benefited. (3) An important point in the impulse which this method of treatment gives to the acquirement of some definite work in life, by which the patient afterwards can become self-supporting. Grohman's conclusions in regard to the actual value of this method is based upon one hundred and six patients, and six years' experience.

The average duration of treatment in each case was six months. Among them were a great many failures.

Although the results from the standpoint of the percentage of cures was not especially brilliant, yet the author has felt that the few pronounced successes were strong evidences enough that this form of therapy was in its elements correct. The best results were obtained in cases of neurasthenia and hysterical, and in some beginning acute psychoses. Especially interesting, however, was the account of several cases in which the patients, on account of unsuitable employment, became neurasthenic. By a change of business in life they practically were completely cured. I think I have quoted enough from these papers to show the general idea of the therapy of work and the general result from a clinical standpoint of its use. In some of the other papers the negative view of the subject is taken, and the cases are mentioned in which this method ought not to be used. This point I shall take up later.

A few words in regard to what might be termed the psychology of the work-cure may be of interest, and it may perhaps be possible to see why it is that a neurasthenic or hysterical patient, under favorable circumstances, may cease from being such, under the influence of well-directed employment. The fundamental distinction between people of this kind and others, from the standpoint of character, must, I think, be found in the abnormal exaggeration of the importance of the ego. In other words, there is a pathological state of introspectiveness. I do not mean this in a philosophical sense at all, in the way a psychologist, for example, might be interested in studying his own sensations, but in the importance which an abnormal sensation, painful or otherwise, takes in their whole being. If it is possible to lessen the attention which such a patient pays to his abnormal sensations, they in a measure disappear. In this way we are able temporarily at least, by suggestion, persuasion, or what not, to do away with the symptoms most prominent in the mind of the patient. If it were possible to devise some method by which a patient's attention might constantly, and at the same time unconsciously, be directed into other channels, a great improvement would at once result. Pain exists only by virtue of one's recognition of it; in other words, it is absolutely a mental phenomenon. If it is possible, and it undeniably is, to have the organic basis for pain and still not have pain, how much more possible is it to cause pain to disappear when there is no material cause for its existence? Work of the sort that has been referred to divides a patient's capacity for being aware of his various symptoms, and the more the work in hand takes possession of his attention and his interest, as well as of the more usual sensory mechanism for its recognition, the more the significance of pain as such decreases. Outside of the question of pain and other abnormal sensations which are so frequently found in patients of this sort, there are other abnormal qualities, which are less tangible and less easily described in clinical terms. It is a rather noteworthy fact that, as a rule, an hysterical or a neurasthenic woman is also an unemployed woman or an idle woman. It is also true that quite a percentage of neurasthenic men and hysterical men, while they are employed, are manifestly busy with work that is unsuitable for them. This lack of employment or definite aim in life is much less a matter of choice than a matter of functional incapacity, one might say. I mean by that, that such an individual is physically and mentally perfectly able to lead an active and useful life, but for some reason the impulse to do so is either entirely wanting or is wastefully applied. To such a class of indi-

viduals the prospect even of being able to be of some use to themselves and to others is an alluring one, and this prospect can be made a practical fact by giving to them some work which in its further development may afford to those that need it a means of livelihood and to those who do not a chance of doing something useful and permanent. This appeals to the imagination and to the ideality which so frequently lies at the base of such natures and forms one of the main points to be relied upon for success from the psychological point of view. It is interesting to note how what may be termed the sense of proportion may be developed in cases of this kind. An average hysterical or neurasthenic patient has but a dim idea of the relative importance which her or his abnormal sensations bear to the rest of the world. The most important thing not only in such a person's consciousness, but in that of others is the perception and analysis of his own physical and mental condition. The effect of work in the first instance is to create a new standard, the units of measurements of which involve a new element. It may be so stated: The individual, his symptoms, and the work in hand; with the development of the latter, the importance of the two former decline and the interesting condition results which was described to me by one of my patients. The symptoms she complained of still remained, but their importance and the amount of attention that could be devoted to them steadily decreased. In other words, this state of mind is an approach to the condition where the non-existence of such symptoms can be effected; for, as I have said before, symptoms that are due to a purely functional cause, exist only by virtue of their conscious recognition. Such very briefly are some of the psychological aspects of the question. By considering these, which seem to me the most important, and others as well, the effect of work upon the mental condition of hysterical and neurasthenic patients can be noted.

Before going to the specific case which is meant to illustrate some of the foregoing facts, it might be well to state briefly the class of cases in which the therapy of work might have an application, and the class of cases in which it is directly contraindicated. The negative side of this question has been very well treated in Erlenmyer's article on "The Importance of Work in the Treatment of Nervous Cases in Institutions," published in the *Berl. Klin. Woch.*, February 11, 1901. The work-cure is contraindicated in (1) cases where fatigue and exhaustion are prominent symptoms; (2) states of excitement; (3) cases where psychopathic symptoms, such as melancholia, anxiousness, are prominent; (4) where the patient has always worked and can work, and in spite of this, the nervous symptoms exist; (5) cerebral or spinal diseases.

From the positive side it might be said that the work-cure can be tried with the hope of success in that class of neurasthenic and hysterical subjects where there exists an average amount of potential physical vigor, where there is no organic nervous or other disease, and where, above all, there is found the requisite amount of intelligence and mental training to enable them to appreciate and understand the purpose and the meaning of the efforts made to hold them. In the class of patients which this paper aims to touch upon, that is neurasthenics and hysterics, it will be found that among them there is, quite a large proportion that come well within these conditions. In my own experience I have found very few who might not have been treated in the manner which has been indicated if the patient's circumstances and the patience of the physician had been used to their utmost. Frequently I must confess that the effort has not

been made for the lack of a certain amount of therapeutic courage and of the lack of technical knowledge which is at all times so essential. The last part of this paper will deal with a brief account of a case of pronounced hysteria in a young woman, where the work-cure has resulted in the marked improvement of the patient and in perhaps her final cure—that is if we can ever say that hysteria is really and permanently cured. The history of the case will be of necessity very brief, because from the clinical standpoint it offers little of interest. A young woman, about thirty years of age, neurotic, of good education, with specially good training in piano-playing. The importance of this last will appear when the question of the selection of the kind of work is under consideration. The patient has always been of a nervous temperament, much given to introspection. Some ten years before, owing to various family troubles, the patient had to face the necessity of earning her own living. The worry incident upon this caused the first outbreak of hysterical symptoms, which afterwards became so prominent and constant. At this time they took the form of general weakness, with periodically occurring attacks of paralysis, generally limited to the right side, paresthesias, headaches, and ocular disturbances. During the years that elapsed from this time until the patient came under my observation, almost every commonly known hysterical symptom was experienced by her, and during this time also almost every method of treating them was used. Rest cures, European travel, electricity, diet, drugs, suggestion, were all tried. Attempts at employment had been made, but they were as a rule unwisely selected; these were piano-teaching, kindergarten, and gardening, etc. The patient had gained in weight very considerable during these years and was the picture of physical health. About a year and a half ago she came to me and presented, at that time, the following group of symptoms: insomnia of the most pronounced form, intense nervousness and irritability, muscular weakness, so pronounced that a walk of one block left her completely exhausted, headache, nausea, occipital paresthesia, right-sided hemianesthesia, and an asthenopia so marked that the use of her eyes longer than one-half hour a day was impossible. There was a great deal of vertigo. The mental state was even more marked. She was very emotional, crying very readily, was depressed, talked of suicide, and saw no hope for herself in the future. It is useless to go into the case more in detail; such a group of symptoms is too well known to need further description. All of these symptoms were present in the face of an absolutely negative physical examination, with the exception of some slight uterine displacement, which in the opinion of the gynecologist who had treated her was of little significance. I think you will agree that the prospect of any therapeutic success in this case seemed dubious; but the intelligence of the patient, together with her normal physical condition, seemed to form an ideal case for the work therapy. Some two weeks were spent in talking with her of the ideas lying at the basis of the method to be pursued. Gohman's work and whatever other literature on the subject could be found was carefully gone over, and then came the selection of the work to be pursued. In the first place the work had to be manual; in the second, it had to be useful; and after that, interesting, attractive, and capable of giving to her a future means of livelihood. Any of you who might be impelled to settle a question of this sort will be amazed at the poverty of selection which is open to a young woman. Of previous training or experience in manual work there was none, but there was to be expected from her previous musical train-

ing a certain amount of manual dexterity. This was the only positive factor which was present. A certain artistic decorative taste might be assumed, together with an absolute lack of mechanical skill. After much thought, it was decided to attempt book-binding. This seemed to fill all the requirements, and at the same time to afford the chance of a future livelihood. Book-binding is mostly manual and requires the closest attention and the greatest care in the matter of detail. In addition, it is distinctly a fine art and is capable of the widest development along the lines which have previously been alluded to. The patient was put to work to learn the trade in the shop of a skillful binder. Two weeks of work was the limit at first placed upon her. From the very beginning a most marked improvement was to be noted, especially in the mental state. The asthenopia disappeared, but the pains remained pretty constant. At the end of six months the patient removed to another city to be under one of the masters of her craft. There she is working from six to eight hours each day and has become so interested in her craft that she has taken no vacation since she began. In point of character and temperament the change has been striking, and although some of the symptoms still remain to bother her, they occupy but a small place in her life. Her work has steadily improved in merit, and there is little doubt that in a year or more this previously hysterical invalid will be able to set up her own shop and lead an active and useful life. It should be mentioned that in all this time there was no medicine given at all. I mention this one case because it stands out as a partial success against the dark background of partial failures in a half dozen other cases in which I have attempted to use the method of Grohman. The failures in the others I attribute solely to my own faulty technic and to my lack of knowledge both in the selection of the work to be pursued and in the manner of introducing the patient to it. I am aware that this one case makes but a feeble argument in support of the work therapy, but its value, I am sure, will be apparent in spite of its loneliness. In conclusion I will quote from Grohman again. At the conclusion of one of his articles he says: "All in all, I believe that the work therapy for nervous people is a test of great patience and endurance on the part of the physician. Whoever feels that he has the necessary patience and interest will be able to help many people."

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CLINICAL REPORTS.

REPORT OF A CASE OF NECROSIS OF THE FRONTAL AND CONTIGUOUS BONES.*

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The patient, Mr. W., has been in this institution at various times during the last fifteen years. When he presented himself the last time he gave the following history: His age is fifty-two years. His occupation is that of a shoemaker. He was never married. His habits have always been very good. He



FIG. 1.



FIG. 2.

never used tobacco or alcoholic liquors to excess. He was sexually moderate but not always careful.

His family history is as follows: His father died when patient was still very young, and patient does not know the cause of death. His mother died of senility. He had no brothers and no sisters.

The patient's early life was free from the diseases of childhood. He enjoyed good health up to his fifteenth year, when his left knee presented all the symptoms of tubercular arthritis. He did not have his knee treated surgically, but allowed the process to run its course. The arthritis resulted in an ankylosis of left knee and contractures, necessitating the use of a crutch. He had gonorrhoea

* From the service of H. L. Nietert, M. D., superintendent and surgeon St. Louis City Hospital.

at the age of twenty for the first time, and a second time at a later period. He never had chaneroids.

His present trouble is as follows: When patient was twenty-six years old he noticed a pimple on his foreskin. He promptly cauterized with pure carbolic acid. The cure was seemingly so rapid and complete that he did not think it necessary to consult a physician. About six months later patient became sick and presented a mild macular eruption. He consulted a physician. The eruption disappeared soon after the treatment was begun. The physician at the time informed him that he had lues and treated him until all external appearances of the disease and all subjective symptoms had ceased. Patient now felt well and worked very steadily at his trade. About eighteen years ago he noticed a swelling forming at site of left frontal eminence. This swelling was attended by

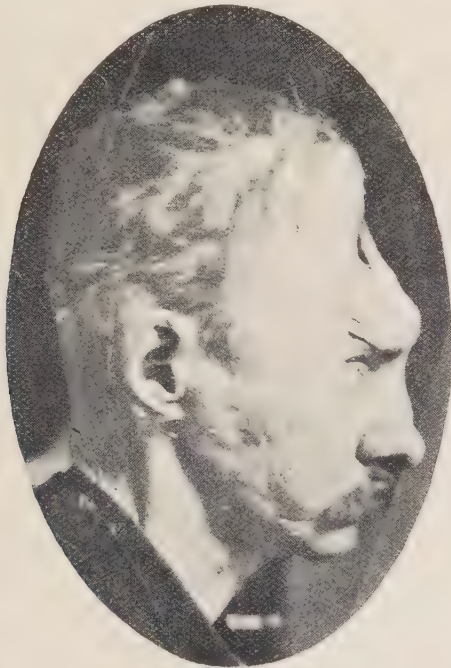


FIG. 3.

few subjective symptoms and had a doughy consistency. He again consulted a physician. The mass was opened and pus came from it. The sore did not heal but continued to discharge and spread up to about three years ago. In 1899 the process began to subside under the influence of potassium iodide and hydrarg. bichlor. One abscess would form after another, open and discharge. The bone was necrotic, portions at times falling away—and some were also removed by the various physicians who attended him. The resulting cicatrices led to great contractures.

The process is mainly confined to the front of the head. His occipital region is not very prominent. The vertical portion of the frontal bone—the contiguous portions of the greater wings of the sphenoid—and the contiguous portions of the parietal bones have been replaced by a cicatrix. Above and be-

hind the left parietal eminence are seen three necrotic spots, each the size of a circle 1 cm. in diameter. Above and behind the left ear is a slender necrotic spot 2 cm. long and $\frac{1}{2}$ cm. wide. The remainder of the scalp is covered with hair thinned by seborrheic eczema. The cicatrix is very dense and firm. The pulsation is faintly but distinctly transmitted from the brain.

The center of the scar shows a superficial ulcer, circular and about two centimeters in diameter. Blood-vessels have developed and are plainly visible in the cicatrix. This immense cicatrization caused a drawing up of both eyebrows, eversion of the right upper eyelid, and nodular gatherings of the scalp above. Beneath the cicatrix, just above the nose, is felt a bony growth the size of a hazelnut. The cicatrix is a little less sensitive than the surrounding tissues. The patient has no subjective symptoms, and no focal symptoms have to the present time been manifest.

The ectropion of the right eye has existed for the past five or six years. Since that time patient has had a severe trachoma and an extensive pannus. Thus the vision of the right eye is obscured. The vision of the left eye is unimpaired. The septum of the nose is perforated. The sense of smell is good. The oral cavity presents a perforation of the hard palate just to the left of the mesal line. He has no teeth, and the alveolar processes are almost entirely absorbed. The sense of taste is unimpaired.

Digestive System.—Appetite is good. Bowels are regular. Assimilation is fair.

Respiratory System.—He has no cough and no expectoration. Tactile fremitus is not increased. Percussion note is normal. Respiratory murmur is good.

Circulatory System.—Area of cardiac dullness is normal. No murmurs are audible. Slight hardening of the arteries is present.

Genital Apparatus.—Patient has at present a phimosis. Genital organs are otherwise normal.

Urinalysis.—Single specimen, c.c. 180; specific gravity, 1.025; translucency, clear yellow color; odor, normal. Reaction to litmus is acid. Albumins are not present by Heller's test (nitric acid test). Sugar is not present (by Fehling's copper test). Microscopical: a few epithelial cells and oxalate crystals were seen; no casts were noticed.

Similar cases have been reported by Broca, Memel, Kuester, Bruns and Fraenkel. More recently W. N. Cole, of Columbus, Ohio, reported a similar case (*The Journal of A. M. A.*, January 25, 1902).

The interesting features of this case are:

- (1) The extreme necrosis.
- (2) Absence of focal and subjective symptoms.
- (3) Subsidence of process when so far advanced.

A CASE OF ACUTE ARTICULAR RHEUMATISM OF THE CRICO-ARYTENOID JOINTS.

BY WILLIAM E. SAUER, M. D., of St. Louis.

Mrs. K., aged forty; is a very fleshy woman, weighing about two hundred pounds. Her parents died of old age. Has one sister, who is enjoying good health. The patient had measles and whooping-cough when a child. When twelve years old she had an attack of acute articular rheumatism involving nearly all the large joints. She was confined to her bed for more than a month. Since that time she has had two similar attacks, but they were not so severe. Otherwise she has always enjoyed good health. Has never had any throat trouble, nor could any venereal history be obtained. For two months previous to February 28th she had pain in and some swelling of the ankle joints, which did not confine her to her bed, but she was unable to leave her room until the above date, when she went out for a walk, and the following day went down town. The next morning she awoke with a sharp pain in her throat, was very hoarse, and when attempting to swallow or speak the pain was quite severe. Thinking that it was only a cold, nothing was done until several days later, when she noticed that the pain was getting worse, and that she could not speak above a whisper. Dr. A. V. L. Brokaw was called in, and, at her own request, she was sent to St. Luke's Hospital, on the morning of March the 8th, when Dr. Brokaw asked me to see the patient. I saw her that afternoon. Her temperature at 9 A. M. had been 101° F.; pulse, 108; respiration, 24. At 3 P. M. it was 100.2° F.; pulse, 100; respiration, 24. She was sitting up in bed the breathing was very stenotic in character. She could not speak above a whisper and complained of pain in her throat, especially on swallowing. I then made a laryngoscopic examination and found the rima glottidis very narrow, the vocal cords and arytenoid cartilages immovable, but no evidence of any inflammation of the cords themselves. There was, however, some slight swelling and redness of the mucous membrane covering the arytenoid joints. External palpation of the larynx elicited sharp pains when pressure was made in the region of the crico-arytenoid joints. Having obtained a history of rheumatism, I ordered her to be given ten grains of the salicylate of soda every two hours, and a Priesnitz compress applied to the neck. When I saw her twenty-four hours later she was breathing somewhat easier and the pain was less, but she had spent a very uncomfortable night, not being able to breathe while lying down; had to sit up all night. Examination of the larynx did not reveal any appreciable changes. Her temperature at 9 A. M. had been 101°; pulse, 102; respiration, 24. At 3 P. M. it was 99.4°; pulse, 88; respiration, 24. The salicylate of soda was ordered continued as before, but after the tenth dose had been given it was ordered to be given only every four hours. Ten grains of trional were ordered in case she did not sleep, to be repeated in two hours if necessary.

On March 10th I saw her again, in the afternoon; she was complaining of headache and ringing noises in her ears; the pain in her throat was very much better, and she could breathe easier. Examination of larynx revealed some slight movement of the cords, and the space between the cords was some larger. Her temperature at 9 A. M. was 100.4°; respiration, 22; pulse, 92. At 3 P. M. it was

99.2°; pulse, 80; respiration, 22. I ordered the salicylate of soda discontinued and fifteen grains of aspirin to be given every four hours instead, on account of the tinnitus which the salicylate had produced.

On March 11th she was feeling so much better that she was up and about; had very little pain in her throat. Her voice was returning again and she could swallow without much pain, but she was troubled with a slight cough. The aspirin was continued as before. Her temperature was 100.2° at 9 A. M., and at 3 P. M. 99.2° F.; pulse, 92; respiration, 18.

March 12th the nurse reported that the patient had had a very troublesome cough during the night, and was able to sleep but little, and her headache still troubled her somewhat. Since morning she had been coughing up quite a great deal of mucus, but her headache was some better. Her temperature at 9 A. M. was 99.6°; pulse, 88; respiration, 18. At 5 P. M. the temperature was 99.6°; pulse, 88; respiration, 26. A superficial examination of the chest revealed large moist rales over both lungs. A mixture of the infus. of ipecac and ammonium chloride was ordered, and the aspirin continued as before. Her voice was still somewhat rough, but had no pain, and could swallow without any difficulty. She left the hospital the following morning (March 13th). Her temperature that morning was 98.6°; pulse, 88; respiration, 20. Aside from the cough she was feeling very well. Her voice was about normal and she was entirely free from any pain. On examining the larynx, found that the movements of the cords were not as free as they normally are, but otherwise could not detect anything abnormal.

On March 19th I saw her again. She informed me that she had not been taking any medicine for several days, and that since March 18th she had been having some pain in the left shoulder joint, but not severe. I again examined the larynx, but could detect nothing abnormal. Since then I have not seen the patient, but Dr. Brokaw informed me that she had had pain in the joints of the lower extremities, and had gone to Okawville, Illinois, to take the baths at that place.

The case here reported is of interest in that it presents a rare manifestation of a very common affection. The literature on acute articular rheumatism of the laryngeal joints is not extensive. The possibility of such an occurrence is mentioned in most of the larger text-books on laryngology, but the actual number of cases reported is small. Desbrousses, in 1861, was the first to admit the possibility of such a condition being due to rheumatism. He reports the case of a woman twenty-seven years of age with rheumatism and pericarditis, and on the 4th day the larynx became involved. Death occurred in twenty days, from gradual asphyxia. Autopsy showed the affected joint to be filled with a reddish colored fluid. Since that time cases have been reported by Windelschmidt, Siamonoski, Compaired, Meyer, Sendziak, Baurowicz, Freudenthal, and others.

CASE OF COLLATERAL CIRCULATION AFTER TEARING OF BOTH RADIAL AND ULNAR ARTERIES.

BY WILLIAM J. KRESS, M. D., of St. Louis.

L. B., male, aged forty years; injured August 31, 1900, while operating a leather stamping machine. His left forearm was badly crushed, completely lacerating all the flexor muscles and tearing out their bellies, severing all tendons as well as both the radial and ulnar arteries. The entire lower third of the radius was crushed into several small pieces which it was necessary to remove. The radius was also fractured at the junction of the upper and middle thirds.

After consultation with Dr. Bernard S. Simpson, who was called to assist me, it was decided to wait for gangrene and its line of demarcation to point out the extent of tissue to be removed. The radial and ulnar arteries were ligated, and all tendons taken up and sewed into their anatomical relations. A bichloride pack, 1 to 2000 and splints were applied. The patient's temperature on the following day was $99.1-5^{\circ}$, gradually rising each day until it reached 101° , which point it never exceeded. The patient's general condition remained good; he was cheerful and suffered very little except when the dressings were changed each morning. Fourteen days after the injury, a well-defined line of demarcation became apparent at the index, middle and ring fingers close to the metacarpophalangeal articulations, and the line also showed on the little finger at the last phalanx.

All fingers were amputated in healthy tissue just above the line of demarcation. The parts healed slowly by granulation and there was very little sloughing, leaving the hand healthy as well as the thumb and little finger. The blood supply to the little finger, thumb and the rest of the metacarpus must have been supplied through the interosseous arteries, because the main trunks were both cut.

The patient has regained motion in the thumb and little finger and in the wrist. I had been advised by several prominent physicians to amputate well up on the forearm on the day of the injury, but declined to do so. The collateral circulation was completely established and a useful hand remains. This case again illustrates in a striking manner that early amputation on the hand and forearm is a practice to be avoided. I believe we cannot be too conservative in the practice of surgery when the hand or fingers are involved. The danger of septic absorption is reduced to a minimum by the moist antiseptic dressing.

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EDITORIAL COMMENT.

THE MISSOURI LAW FOR THE PREVENTION OF BLINDNESS IN INFANTS.

Legislation looking to the prevention of blindness consecutive to ophthalmia neonatorum was initiated in the United States in 1890 by the passage of "An Act for the Prevention of Blindness" by the legislature of the State of New York. This law, which has served as a model for similar laws subsequently enacted by the States of Maine, Rhode Island, Ohio, Maryland and Minnesota, provided that "Should any midwife or nurse notice that one or both eyes of an infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse to report the fact in writing, within six hours, to the health officer or some legally qualified practitioner of medicine." In 1895 the following bill was passed by the Missouri State legislature and signed by Governor Stone:

"Be it Enacted by the General Assembly of the State of Missouri, as follows:

"SECTION 1. Should one or both lids of either eye or of both eyes of an infant become red or swollen, or should there be any discharge from either eye or from both eyes, at any time within three weeks after its birth, it shall be the duty of the midwife, nurse, or other person having charge of said infant, at once, unless for good cause shown, to report the condition of said eyes to a legally qualified practitioner of medicine.

"SEC. 2. Every health officer shall furnish a copy of this act to each and every one who is known to him to act as midwife or nurse, in the city or town

for which such health officer is appointed, and the secretary of state shall cause a sufficient number of copies of this act to be printed, and shall supply the same to such health officers on application.

"SEC. 3. Any failure to comply with the provisions of this act shall be a misdemeanor, and shall be punishable by a fine of not less than ten and not more than one hundred dollars, or by imprisonment not to exceed six months, or by both such fine and imprisonment.

"SEC. 4. All acts and parts of acts inconsistent with this act are hereby repealed."

This law conforms in general to the laws enacted in other States. It is, however, superior to any of its predecessors in that it distinctly provides that each midwife and nurse shall be furnished with a copy of the act, thereby rendering invalid a fictitious plea of ignorance of the law.

In the seven years during which the law has been on the statute books there have occurred no convictions, and, as far as the writer has been able to ascertain, no prosecutions. Does this mean that the race of midwives and nurses in the State of Missouri are any less careless and ignorant than their sisters in other States? Assuredly not. It simply indicates that when cases of gross neglect resulting perhaps in the loss of one or both eyes have been brought to the notice of the medical practitioner, he has not lived up to the courage of his convictions, and by failing to prosecute, has distinctly connived at the violation of the law. It is assuredly not an agreeable task for a practitioner to appear as a prosecutor against a midwife, especially as his motives will inevitably be misunderstood by a large number of the laity. But this consideration should weigh not a hair in the balance when the securing of a single conviction would bring about healthy respect for the law in the minds of these ignorant women and thus be the direct means of saving infants yet unborn from the misery of irremediable blindness.

COMPLICATIONS OF CHICKEN-POX.

In the great majority of cases varicella is such a mild infection that, except from the standpoint of diagnosis, practitioners do not give it a great deal of attention. That it is, however, not always an absolutely benign affection has been demonstrated repeatedly. Semtschenko has reported eight hundred and seventy-two cases of varicella, seventeen of which had a complicating otitis media and thirty-four an osteitis. Rille has reported several cases of suppurative arthritis. Of late, however, especial attention has been paid to the condition of the kidneys in varicella. According to Rille, albuminuria has been found in at least twenty per cent. of all his cases, while the efflorescence was at its height.

It would appear, however, that in the majority of these cases, the albuminuria amounted merely to a febrile manifestation. True nephritis occurs in a very much smaller proportion of the cases. Semtschenko found albumin in only 10.5 per cent. of his cases.

It is noteworthy that the severity of the eruption does not stand in any causal relation to the albuminuria, because in cases collected by several French observers, some of the severest cases showed normal urine, while albumin was often found in the very mildest.

It is also to be noted that the nephritis, when it does occur, does not supervene until the second week from the beginning of the attack.

Obviously, therefore, it would be the part of wisdom to examine the urine in varicella as a matter of routine, and to continue the examinations, where albumin is found, for some time after all acute symptoms have subsided.

THE ORIGIN OF SOME MODERN METHODS OF MEDICAL TREATMENT.

We are too prone, all of us, in this day of restless activity, to cheat the past of her dues; in other words, to give little or no thought to the origin and originator of this or that method which has become an every-day usage with us. Who but a lecturer on the practice of surgery knows or even cares when the first artery forceps was invented, or by whom the first ligature applied!

Some of the chemicals have, as is commonly known, been used for a long time in the effort to produce hemostasis; but one of them has come into decided prominence of late, and in its free use many of us doubtless pride ourselves that we are just a step in advance of the most of our brethren. Reference is made to gelatine, which the French physiologist Dastre showed to possess the property of making a dog's blood coagulate when injected into a vein.

It was not much later that a surgeon of the nationality just referred to, Lancereaux by name, applied this idea to the treatment of aortic aneurism, hoping by the introduction of gelatine under the skin to bring about clotting of the blood in what may be termed the area of least resistance, viz., the aneurismal sack. Then the world took up the fad, and for a time there was as much written about aneurisms as is done on the subject of prostatic hypertrophy at present, or was on that of the Gasserian ganglion some two years ago.

It will doubtless be a matter of surprise to many of the friends of gelatine to know that it has been used almost two thousand years in checking hemorrhage. Dr. Y. Miwa, of Chiba, Japan (whose article is abstracted in the surgical department of this number), is authority for the statement that the ancient Chinese and Japanese used this product extensively for the purpose now under discussion. As early as 204 B. C., the practice was described by the former, and the literature of the two countries for the years succeeding that time was full of mention of the subject. The custom was to prepare gelatine from the hides of cattle, then it was blown into the cavity from which the blood came, being employed thus, both in the form of a solution and of a powder. It was considered useful in hemorrhages from the nose, mouth, rectum, uterus and urethra.

Thus it is that a substance which we have prided ourselves in terming one of the more modern therapeutic agents, is in reality about as old as the Christian era itself. Possible research might show that many other means and methods now regarded decidedly new, gain this distinction only because they are so old as to have been completely forgotten and lost sight of for a few centuries.

THE ST. LOUIS MEDICAL LIBRARY—A FACTOR IN THE DAILY LIFE OF THE ST. LOUIS MEDICAL PROFESSION.

Many attempts have been made during the existence of St. Louis to found a medical library. Unfortunately one and all have met with failure. The apparent hopelessness of the task has doubtless deterred many earnest workers from venturing in this field of activity. It has remained for the St. Louis Medical Library Association to achieve what has hitherto proved impossible.

The St. Louis Medical Library Association has completed its third year of existence. It can point with justifiable pride to its tangible assets. Beginning with nothing, it has created a modest but efficient reference library. Two rooms in the Y. M. C. A. building are filled (in reality overfilled) with the conventional equipment of a library in active operation. These rooms are open for use during the afternoon and evening of each day save Sundays and legal holidays. The assistant librarian is in attendance, and to her cordial co-operation and proven efficiency much of the success of the daily reference service is due.

It has been the policy of the association to expend its limited income in the acquisition of standard current literature rather than text-books. Reflection upon the rapid passing of the accepted knowledge of to-day into the limbo of yesterday will furnish indorsement of such a policy during the earlier years of the library's growth. More than perfunctory commendation is justly due the adopted system of indexing original articles that appear in the current literature. Only those who search for data, whether for personal acquisition or in the formation of a "reference list," can appreciate the full value of such an efficient aid as a time-economizing agent. Access to such an index is to a worker ample compensation for the modest outlay required for membership.

There are now on the shelves 3482 volumes. One hundred and eighty-eight journals are received, of which two-thirds are American and one-third foreign. Of these, sixty-one have been selected as suitable material for indexing. The following statistics show at a glance the scope of this system and exhibit such articles as have been indexed up to date:

General.....	173	Pathology.....	585	Otology.....	402
History.....	270	Bacteriology.....	803	Laryngology.....	439
Ethics.....	85	Prac. of Med.....	3759	Genito-Urinary....	1023
Anatomy.....	317	Surgery.....	3562	Syphilology.....	1026
Histology.....	162	Gynecology.....	1103	Dermatology.....	600
Physiology.....	451	Obstetrics.....	729	Dentistry.....	20
Chemistry.....	104	Pediatrics.....	381	Veterinary Medicine.	25
Materia Medica....	393	Neurology.....	1526	Hygiene.....	424
Therapeutics.....	1158	Ophthalmology....	1093	Med. Jurisprudence.	172

A total of 20,785.

It cannot be successfully controverted that the St. Louis Medical Library Association has done its duty well. This fact is the more strongly emphasized when consideration is given to the limited income from which such a valuable scientific nucleus has been created. Membership is divided into three classes—Life, Active and Associate; the monetary consideration being, respectively, one hundred dollars; twenty-five dollars the first year, and five dollars annually thereafter; and five dollars annually. Life and active members participate in the government and policy of the association; associates secure the advantages of the library, but are debarred from the franchise. The total membership is one hundred and forty-eight, of which eighty-two are active and sixty-six associate. Contributions from extraneous sources during three years have amounted to a trifle over one thousand dollars.

Thoughtful consideration of this brief array of facts leads to certain interesting conclusions.

First.—The Library Association has consistently and faithfully developed plans by means of which a medical library is now in active operation in St. Louis.

Second.—The medical library has been created, and is to-day still laboring, under heavy disadvantages.

Third.—The disadvantages are: lack of moral support and lack of financial support on the part of the profession; lack of an adequate endowment.

Fourth.—The medical profession of St. Louis and its environs stand guilty of non-appreciation of one of the most valuable aids in developing medical knowledge, in eradicating error, and in furnishing not only corner-stone material, but the scientific grace and culture of the accomplished physician.

It is of vital interest for the medical profession of St. Louis that it should realize the true etiology of this scientific lethargy.

Is but eight per cent. of the medical profession of St. Louis in need of consulting the scientific literature of the world? Are 1700 St. Louis physicians so versed in medical literature that they can justify themselves in ignoring the facilities afforded by the medical library? Are there 1700 private medical libraries in St. Louis better equipped than the St. Louis Medical Library? Are there 1700 St. Louis physicians too poor to invest the modest sum that is requisite to secure membership in the Library Association? Is it a fact that 1700 St. Louis physicians are "too busy" to utilize a medical library? Are there but 148 St. Louis physicians who are willing to do their individual share towards supporting a medical library in order that the local medical profession (in addition to themselves) may be kept in touch with affairs medical beyond the State boundary lines of Missouri?

If such be the case the time has arrived for the medical library to discontinue its superfluous existence; for the officers of the Library Association to cease from their unappreciated labor; and for the medical profession of St. Louis self-pillared upon a crass provincialism, to content itself (*apres St. Simon Stylitis*) with a serenely complacent and uninterrupted contemplation of its own umbilicus.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Hemoglobinuria.—STEMPEL, Breslau (*Centralblatt fuer die Grenzgebiete der Medizin und Chirurgie*, March 10 and April 3, 1902), presents a most complete review of the literature on hemoglobinuria, with some two hundred literature references. The manner in which the hemoglobin leaves the cells and ultimately gains entrance into the urine was carefully described by Ponfick and Litten. Forsbach demonstrated that the hemoglobin is excreted by the glomeruli, and his views were corroborated by the experiments of Ribbert. Silberman and Christomanos hold the opposite view, maintaining that the tubules are concerned in this process.

There are three forms of hemoglobinuria, depending upon the causative factors, viz.: paroxysmal, infectious, and toxic. Paroxysmal hemoglobinuria was first observed by Charles Stuart in 1794. Following this the English had many opportunities to observe the affection. Dickinson considered it renal in origin. Hassal called it winter hemoglobinuria, because he observed it in cold weather only. Fleischer found that unusual physical exertion could bring about hemoglobinuria. The theory of infectious origin found early support, and it was often observed in syphilis and malaria. Boas thinks that the infection produces a marked alteration of the blood in which the hemoglobin is held in loose combination, while the exposure to cold, exertion, etc., results in the dissolution and excretion of the hemoglobin. The French have been the chief adherents to the theory of renal origin. Popper attributes the phenomenon to a vasomotor neurosis. Leubé and other German authorities think it due to a lowered resistance of the red blood corpuscles, in which the hemoglobin is held in very loose combination. Legg found this affection most often between the ages of twenty and forty; never under two years of age and never over forty. Anemic, poorly nourished individuals are especially predisposed to the affection. He usually experiences certain prodromal symptoms, which enables him to predict the attack. A variety of symptoms have been described by different writers. Experimental and blood examinations have been made in paroxysmal hemoglobinuria by Ponfick, Ehrlich, Du Cazal, Goebler, Hayem, Chvostek and others, and have led to a fair knowledge of the pathology of the blood in these cases. The diagnosis is not a difficult matter, especially when the patient is seen during an attack and the urine is examined microscopically and chemically. It must be differentiated from hematuria through a microscopical examination. The prognosis in the paroxysmal type is, *quoad vitam*, not bad. This does not hold good, however, in the toxic and infectious types. It frequently holds on for a number of years, disappearing in the summer time and reappearing in the winter. Various forms of treatment have been recommended: quinine in cases due to malaria, anti-luetic treatment in those due to syphilis, etc. The paroxysmal type has presented greater difficulties in treatment, since it is due to a predisposition. The patient should be kept very warm. Leyden and Klemperer have recommended the hardening process, gradually rendering the patient more tolerant to cold. Hemoglobinuria in which infection has played the chief role have at various times been observed in syphilis, malaria, pneumonia, measles, scarlet fever, typhoid fever, tetanus, erysipelas, etc.

Among those substances which often produce a dissolution of the red blood corpuscles in the body are a number of drugs which are almost indispensable. These cases are more apt to result seriously than those of the paroxysmal type. This is due to the obstruction of the uriniferous tubules in these cases and the resulting uremia. The substances, which under certain circumstances are cythemolytic, may be secretions or constituents of the body itself or substances from the vegetable and mineral kingdoms. Hemoglobin itself, the blood of other animals, distilled water, etc., have all been known to produce hemoglobinuria when injected into the blood. Among chemical substances which have been known to produce the same may be mentioned sulphuric acid, hydrochloric acid, toluylendiamin, aniline oil, oxalic acid, pyrogallie acid, potassium chlorate, sulfonal, quinine, carbolic acid, glycerine and certain gases.

The author concludes from his study of the literature that every individual is susceptible to the toxic and infectious forms of hemoglobinuria, but that the paroxysmal form is experienced only by those who have the predisposition, be it acquired or congenital, viz., a pathological condition of the red blood corpuscles. Cold, exertion, etc., are but the exciting causes.

The Blood in Measles and Scarlet Fever of Childhood.—RECKZEH, Berlin (*Zeitschrift fuer Klinische Medizin*, Parts 1 and 2, 1902), presents, together with the report of the results of his observations on the blood in measles and scarlet fever, a complete review of the literature on the subject. The detailed examination of the blood in ten cases of measles gave the following results: The number of red blood corpuscles varied from 3.9 to 7.3 million to the cubic millimeter. The highest count was found in a six-year-old boy. In nine of the cases there was an increase in the number of red blood corpuscles during convalescence. Whether this was due to a return to the normal after the fever, or whether it was due to the improvement of the surroundings of the children, it is difficult to say. The complications brought about by a high fever did not influence the number of leucocytes. In six cases there were isolated macrocytes, in one microcytes, in two normoblasts, and in one macrocytes and shadows. Poikilocytosis appeared once in an infant. In other words, the red cells presented nothing which might be considered characteristic of measles. The average percentage of hemoglobin was ninety per cent. The color index varied from 0.60 per cent. to 1.17 per cent. The blood plates and fibrin were somewhat decreased. In five cases a temporary increase of the blood plates was noted in the absence of any definite cause. There was no variation from the usual rapidity of shrinking and rouleaux formation.

The leucocytes presented the most interesting changes. There was invariably a decrease of the leucocytes at the height of the disease. During the early days of the affection the leucocytes count is high in comparison with the count in normal adults, but low in comparison with the count in normal children and the count observed later in the course of the disease. They increase gradually with the disappearance of the rash, and reach the highest point with the total disappearance of the eruption. Complications, such as bronchitis, adenitis, otitis media, etc., invariably increased the leucocytosis. Nephritis seemed to have no influence on the leucocytes. In four cases a decrease took place with the recurrence of the eruption and increase in temperature. The polynuclear neutrophile cells show an increased percentage in the beginning of the disease (seventy-six per cent. to eighty-two per cent.). This, however, is not an absolute increase. There is no increased activity on the part of the bone marrow until later in the disease. The large lymphocytes varied from 1.5 per cent. to 2 per cent., while the small lymphocytes varied from 2 per cent. to 31 per cent., the latter being increased markedly with the disappearance of the eruption. The transitional form varied from 0 to 14 per cent. from the same cause. The eosinophiles were found in very small numbers. Leucocytosis occurs in these cases only in the presence of complications, especially at the height of the disease and

in complications of the respiratory tract. Glandular complications manifest themselves in the blood through a lymphocytosis.

[TO BE CONCLUDED.]

Leucocytosis as a Point of Prognosis in Appendicitis.—JOY and WRIGHT (*Medical News*, April 5, 1902) report their observation in a series of cases of appendicitis, with special reference to the leucocyte count. They consider the leucocytes the best indicator of the true nature and course of the case. They conclude that the leucocyte count is a valuable aid to prognosis in appendicitis, distinct from its diagnostic value. A high stationary or an increasing count indicates a morbid condition of increasing severity, which demands operation regardless of the clinical symptoms. A low stationary or decreasing count indicates that the severity of the case is abating, and that operation may be safely postponed. Cases in which a falling count is accompanied by unmistakable signs of a generally bad condition form the rare exception to this rule, and in them there is no chance of error. No arbitrary set of prognostic values to be assigned to various degrees of leucocytosis can be constructed. The important point is to follow any scheme in which one learns to have confidence, provided the essential principles be preserved. The count indicates when the operation should be performed for the best interests of the patient. Circumstances often render it desirable to postpone operation in appendicitis. Study of the blood count enables it to be determined whether this may be done with safety and often renders such postponement permissible.

Concerning a Case Belonging to a Group of Leukemia-like Diseases.—MICHAELIS, Berlin (*Zeitschrift fuer Klinische Medizin*, Parts 1 and 2, 1902).—The points of chief importance in this case may be summed up in the following: The patient, a female fifty years of age, died within three months of an affection of the blood building organs. There was no enlargement of the lymph nodes; the spleen was large and soft, and the bone marrow soft. The blood contained, from time to time, normoblasts. While there was no absolute increase of leucocytes, there was a marked discrepancy in the relative number of the leucocytes to one another. There were scarcely any but lymphocytes to be found, the large ones being vastly in the majority. There were about seven per cent. of mononuclear neutrophile cells—the myelocytes of Ehrlich. No other leucocytes were in evidence. The bone marrow was made up largely of lymphocytes and giant cells—few myelocytes. The spleen presented practically the same microscopical appearance. In the lymph nodes and in the liver and kidneys there were bone-marrow giant cells. Much difficulty is encountered in the classification of such a case. It certainly resembles leukemia, but there is much doubt as to the type of leukemia to which it belongs. Comparison with the types described by Pinkus and others fails to reveal the class to which this case may be assigned.

Agreement Between the History of Yellow Fever and Its Transmission by the Culex Mosquito (Stegomyia of Theobald).—FINLAY (*Journal American Medical Association*, April 19, 1902).—The history of yellow fever enables us to establish a very plausible connection between the earliest undoubted epidemics described in the seventeenth century and the previous ones, under the names of plague, pestilence, etc., which attacked the Spaniards at various points ever since the conquest of Mexico in 1519. Since the American Indians have no natural immunity against the disease, and it had never been known to Europeans before coming to America, there must have existed, before the discovery, endemic foci on this side of the Atlantic. The final confirmation of the role which the culex mosquito plays in the transmission of yellow fever has been sanctioned by the experiments of many authorities on the subject. It is now possible to determine the conditions which are necessary for the development of yellow fever as

an epidemic in a given locality, not too highly situated above the sea level, and where temperatures between 77° and 95° F. prevail. In some of these localities the yellow fever mosquito belongs to the fauna of the place, and in others that species does not habitually exist. The endemic foci, from pre-Columbian times to the seventeenth century, lay within a zone between the twentieth and eighth parallels of north latitude, and from east to west between the Atlantic coast and the Leeward Islands. In the seventeenth century that zone extended both northward and southward. The mosquitoes were transmitted from place to place by sailing vessels, and several severe epidemics in 1494 in Santo Domingo and the Canary Islands were attributable to this fact. Not only contaminated mosquitoes but healthy ones were transported to subtropical countries, where they have become acclimated, as in the south of Spain, coasts of the Mediterranean, etc. This would constitute a dangerous complication if yellow fever cases were introduced into these localities. The Andes have stood as a barrier protecting the western coast of America from the contaminated mosquitoes. This barrier will have been removed when the Panama or Nicaragua canal is opened. The existing foci of the disease should be extinguished before that time.

Simple Cylindruria Produced by the Artificial Production of Biliary Stagnation.—WALLERSTEIN, Moscow (*Berliner Klinische Wochenschrift*, April 7, 1902), ligated the ductus communis choledochus in a number of young dogs, and observed the effects of the biliary stagnation upon the kidneys and urine. At no time during his observation of these animals did albumin appear in the urine. The bile pigments were found about forty-eight hours after the ligation of the duct, and continued to increase in quantity from this time. During the first two days there were no visible microscopic changes in the urine. On the third day, however, there appeared, in small numbers, epithelial cells, granular casts, kidney cells and white blood corpuscles. On the fourth day perfect hyaline casts were found. There was a marked polyuria in every case after about the third day. Special attention is called to the fact that in all of these experiments there appeared in the urine first epithelial cells and granular casts, and then hyaline casts in transitional stages and perfectly developed. According to Blumenthal, the hyaline cast is the end result of cast formations, while the epithelial and granular casts are simply incomplete, transitional forms. The examinations of the urine and the kidneys in post-mortem in all these experiments leads the author to the conclusion that it is possible to produce a pure cylindruria through experimental icterus, and that the urinary casts are, as Senator has maintained, developed from the epithelium of the uriniferous tubules. Inasmuch as there was at no time albumin present, Ribbert's theory, that casts are due to the coagulation of albumin in the tubules, is without ground.

Meniere's Disease, with Report of a Recovery.—GESCHEIT, Budapest (*Berliner Klinische Wochenschrift*, No. 14, 1902) reports a case of Meniere's disease in which a cure was effected through the employment of galvanization. The point of greatest importance in dealing with such cases is that of differential diagnosis. The author excluded epilepsy, diseases of the brain, neurasthenia, and Trousseau's "vertigo a stomacho laeso," as a possible cause of the vertigo in this case. Though the patient was a neurasthenic, there seemed to be no connection between this and the symptoms in question, for there were certain ear symptoms that could not be explained through the existence of neurasthenia. There existed also in this case a chronic inflammation of the tympanic cavity. This too seemed to be independent of the Meniere disease, inasmuch as this persisted even after the vertigo, etc., disappeared. This was a case of Meniere's disease characterized by deafness, permanent tinnitus, vertigo, vomiting, and often unconsciousness. It is very difficult, in fact, often impossible, to locate the anatomical basis of this disease. It is pretty generally agreed, however,

that it is due either to an inflammatory process, or to a transudation or hemorrhage into the vestibule and the semicircular canals. The author is of the belief that in his case it was due to a transudation. The various forms of treatment usually recommended were employed without effect. The desired results were only attained when he began the use of the galvanic current. Application of a moderate current (three to four milliampere) was made for three minutes every other day. The positive pole was placed on the tragus of the affected ear, and the negative over the cervical vertebre. Improvement was noticed after the second application, and after twenty-five he was practically cured. The hearing improved, the vertigo disappeared, and the gait became certain.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Basedow's Disease.—KOCHER (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Bd. ix., Hft. 1 und 2).—This is a most splendid article of 304 pages, complete in every detail, and in it is reviewed the work which has been done in this line, at Berne, since 1883. In all there were the uncommon number of ninety-three cases treated, not all having been operated upon, however. The onset of the disease was in far the greater number of cases gradual; the patients hardly knew just when it did begin. A hereditary factor was noted in most instances; if not Basedow's disease, then some decided nervous predisposition or other. As far as sex is concerned, the malady manifested itself, as might have been expected, much more frequently in women than in men. Many pages are devoted to a consideration, in all their details, of the complex symptom picture which enables us to recognize this disease. The operative indications are ligation of the vessels which supply the diseased portion of the thyroid, or excision of that part of the gland itself; by diseased is meant that series of changes in the organ, which make themselves known in pulsation of it, a swish heard in its vessels, the vessels being seen to be enlarged, or felt as enlarged. Often a patient who is in a highly nervous state must be subjected to quieting treatment for a time before operation is advisable. No disinfectants are to be used on the patient's skin, since it resorbs so much as to expose the sufferer to the additional danger of being poisoned. Such operations are to be done under local anesthesia exclusively, for well-known reasons. Post-operative psychoses of the most alarming nature are not infrequently seen, though their actual danger may be overestimated. The results in the Kocher clinic were of the most gratifying nature, cure being effected in seventy-six per cent. of all cases which were operated upon, while improvement was noted in an additional fourteen per cent. A second operation was necessary in some instances. The amount of work done in the preparation of this article, and the extent of the ground covered, can be inferred from the fact that the author quotes 1423 literature references; the younger Kocher bids fair to be a worthy successor of his brilliant father.

Notes on Gastrostomy.—TERRIER and GOSSET (*Revue de Chirurgie*, No. 2, 1902).—The authors have operated upon eight cases during the past few months, and their review of the same has especial reference to two points: First, the technique and second the results. The proper incision is a vertical one, over the middle of the left rectus muscle. Less injury is done thus, and at the same time a long track is established, which would not be the case if muscles were merely

separated. The nerves to the rectus are not to be divided, else the sphincter action of that muscle will be impaired. After the stomach wall has been caught up into a sort of cone, four "U" sutures are introduced, uniting it to the peritoneum and posterior sheath of the rectus muscle. Then four more similar sutures fasten it to the anterior layer of the same sheath, after which the serous and muscular coats are incised, allowing the mucosa to herniate itself. This latter is then opened and sewn to the skin all the way round, the redundancy of it acting as a plug to the new opening.

One patient died from the operation, while the remaining seven lived from seventeen days to nine and one-half months after the same. There is perfect continence in all but two. To possess this latter virtue, such a fistula must be small, high, long, have the sphincteric action of the rectus muscle, and at the same time be closed by the so-called obturator of stomach mucous membrane.

Changes in the Kidneys After Operations Within the Abdominal Cavity.—V. BRUNN (*Archiv. fuer Klinische Chirurgie*, Bd. lxx., Hft. 1).—In all cases and under all circumstances which force the kidneys to eliminate large quantities of poisonous substances, the epithelium lining the convoluted tubules is necessarily injured. In support of the conclusions to be drawn later, the author relates eleven cases in which there was a laparotomy followed by peritonitis, two cases in which no peritonitis succeeded such an operation; in all of these there was, however, necrosis of renal epithelium. Further are cited six cases of laparotomy where there was no peritonitis and no necrosis. The kidney disease is shown by v. Brunn to be neither the result of the laparotomy as such, nor of a fatal intestinal operation *per se*, nor of chloroform (in his cases), nor of local peritonitis, nor of putrefaction. He concludes from the mass of evidence at his command that general disease of the peritoneum brings it about.

Extrophy of the Bladder Cured by Maydl's Operation.—ESTOR (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxviii, No. 6).—The author had a case presented to the society, in which he had performed this most difficult operation, with a result that was satisfactory in every particular. The procedure is divided into five steps, as follows: 1. The bladder is excised. 2. The ureters with the trigonum are mobilized. 3. An incision is made into the rectum. 4. The trigonum is sewn into the slit in the rectum. 5. The abdomen is closed. In the case at hand, it is interesting to note that the escape of urine from the rectum was by no means steady; on the other hand, it was voided about once every hour, under usual circumstances.

An Experimental and Clinical Research on the Temporary Closure of the Carotid Arteries.—CRILE (*Annals of Surgery*, April, 1902).—The injury inflicted upon the coats of a vessel in temporary closure of the same is commensurate with the pressure put upon it, the length of time it is compressed, and with the amount and extent of wound infection. In the nineteen dogs upon which the author experimented, the carotids were closed often from twenty-four to forty-eight hours without any ill-effects. An original screw-clamp was used; it consisted of steel covered with rubber. The Trendelenburg position is advocated, in order that venous stasis may in part make up for the cerebral anemia produced by the arterial closure. The author has made use of the procedure on eighteen human subjects; in ten both carotids were closed, and in eight but one was so treated. There was no death directly due to the operation; there was, further, no permanent effect upon the vessels or upon the circulation. The time of operating was greatly lessened as well as the amount of hemorrhage lessened, so the procedure can be said to have been of decided advantage. Atropine was sed with effect, to prevent cardiac inhibition resulting from irritation of the vagus nerve, and this idea was further carried out by blocking the nerve with cam during the operation.

A Very Early Symptom of Exudative Pleurisy.—PRZEWAŁSKI (*Centralblatt fuer Chirurgie*, April 5, 1902).—The author refers to an observation which he has made in nineteen of these cases, fourteen of them serous and five of them purulent. He has noted that the intercostal spaces are very early narrowed, and that the resistance of the tissues filling those spaces is decidedly increased. This he attributed to a tonic contraction of the internal intercostal muscles over the affected area, in very much the same way as the muscles surrounding one of the joints of an extremity contract when the joint becomes the seat of an inflammatory process.

The Treatment of Genital Tuberculosis in Men.—AUDRY (*Archives Provinciales de Chirurgie*, Tome xi, No. 3).—If there is disease of the serotal contents the author operates when the bladder is not involved, or if the lungs are not too extensively affected. He believes that the patient should be castrated when the tuberculous process is very acute, or when it has rapidly reached any marked extent. Audry never does a partial operation for disease of the epididymis, preferring typical removal of the same. An atypical or partial procedure on the testicle is admissible, however, in case there be but one organ, or where there is danger of the serious mental effect which not infrequently follows this form of mutilation. The vas deferens should always be severed by the use of the thermo-cautery, as there is a certainty of infecting it if the instruments which have been employed in exposing a tuberculous focus are brought in contact with it. Tuberculosis of the prostate has been successfully treated by the author at a secondary operation, after he had first operated upon the serotal contents.

The Rational Procedure for the Removal of Foreign Bodies From the Lower Portion of the Esophagus.—V. HACKER (*Beitrag zur Klinischen Chirurgie*, Bd. xxxii, Hft. 2).—The vast experience of the author in this field makes anything from his pen well worth reading. He opens by saying that an "X-ray" of such a patient is of value only when the individual lies half on the side, since the shadow of the vertebræ must otherwise obscure the field. In an adult it is impossible to bring the tips of two fingers together if the one hand be introduced through the stomach and the other into the esophagus through a wound in the neck. For examination of the tube by way of the cardia, a median abdominal incision gives the best general results, though this route has not been always chosen by any means. The difficulty of this procedure must differ in the various cases, since it is influenced by the length of the thorax, by the size and position of the liver, as well as by a number of other factors. In fact, a foreign body is always to be removed from above by the aid of the esophagoscope, unless it be *very* near the cardiac orifice. With the abdomen open, one can usually gain much knowledge upon this point before the stomach has been opened, and then if a stomach wound is found desirable at all it will be found to injure the vessels less, if this be made across the longitudinal axis of the organ.

A Case of Double Rachitic Coxa Vara.—GENAERT (*Journal de Chirurgie et Annales de la Société belge de Chirurgie*, No. 1, 1902).—The patient was a boy of eight years, in a moderately good state of nutrition. The most pronounced symptom was in the limitation of abduction, this being true of both sides. Flexion of both sides was normal, inward rotation somewhat limited on both. There was no other external mark of rachitis on the skeletal system. The child could walk or play with no more fatigue than others of the same age; there were none of the usual sensitive or painful areas. The diagnosis of coxa vara was verified by the X-ray examination.

Remarks Concerning the Practice of Aseptic Surgery.—MCBURNEY (*The New York Medical Journal*, March 22, 1902).—A small number of germs are sure to

gain access to every wound even under the most ideal aseptic conditions, hence it becomes our duty to keep in mind the fact that our chief aim must be to leave tissues in the best possible condition for self-defense. It is a delight to read how strongly so distinguished a surgeon as McBurney indorses rubber gloves as the best possible way of rendering the hands aseptic. By their use the tissues suffer less in being handled than would be the case were the rough hands used. Most of the objections to their use are purely theoretical; as to cutting them in an operation, no surgeon would be more likely to do it than he would be to cut a large vessel; of course, both accidents are possible though and do happen. If everything we use has been made aseptic, then it becomes usually a matter of the tissues having been improperly handled, that is, left in no condition for self-defense, if infection ensues upon an operation. So there must be no tearing and crushing, no use of powerful antiseptics, if we would see ideal results. Septic wounds should receive the same care as others, else the best results will not be attained. The safety of modern surgical procedures should not make one careless of diagnosis; this is a matter of even greater importance than formerly, when less was expected of the surgeon, hence less good expected.

Operations Under Regional Cocaine Anesthesia.—ISRAELSON (*St. Petersburger Medicinische Wochenschrift*, March 15, 1902).—As an example of this method one cannot do better than recite the manner in which a paronychia on the finger is to be treated. First, a rubber band is to be thrown around the base and then a one-half per cent. cocaine or a one per cent. "B" eucaine solution introduced. Three punctures are to be made over the first phalanx, one on either side, the needle being so directed as to block the nerves which run on either side of the flexor tendon, and the third injection should be into the tissues on the dorsum of this same phalanx. Thus one affects the entire nerve supply to the finger, and after waiting five minutes the part will be found to be completely insensible. The entire hand and foot may be treated in like manner by knowing just where to find and block the nerves, information which is given in detail by the author. The method has its indication in inflammatory conditions where the Schleich infiltration can, for obvious reasons, not be made.

The Changes in the Portion of Intestine Immediately Above a Stenotic Area.—PATEL (*Revue de Chirurgie*, No. 3, 1902).—This portion of the gut is dilated and has its wall of the usual thickness or possibly thinned when the obstruction lies extra-parietal. Under these conditions a slight degree of hypertrophy may take place, but only when the obstruction has persisted for a long time. But when the obstruction is parietal a very different state of affairs comes about. Now, hypertrophy commences at once, as seen when a tuberculous ulceration of the mucous membrane leads to constriction. On the other hand, narrowing from the presence of a myoma leads to no such changes, it is only when the mucosa is affected that we see such. A microscopical examination of such intestines has taught the author many valuable lessons. This thickening of the wall of the viscus is brought about merely by an infiltration of the muscular and fibrous coats. There is in reality no growth of muscular elements, hence the affair cannot be regarded as a compensatory hypertrophy. So the gut can be regarded as only diseased, and the operative indication is here, as elsewhere, to operate in healthy tissue; that is, to remove the thickened portion.

A New Conservative Operation on the Testicle.—RASUMOWSKY (*Archiv fuer klinische Chirurgie*, Bd. lxx, Hft. 3).—Tuberculosis of the serotal contents is, in the beginning at least, limited to the epididymis, hence ablation of all or part of that structure answers every purpose. Furthermore, the disease often appears on both sides at once, hence castration as a routine practice were little short of criminal. With the epididymis removed and no passage left for the semen, still the organ is of worth for its internal secretion. The author believes that this

has an effect on the matter of successful cohabitation. He has tried four times upon the human, to accomplish what has been done upon the dog, viz., the establishment of a communication between testicle and vas deferens, after removal of the epididymis. This is done in two different ways, the first of which is as follows: 1. The organ is resected, the vessels to the testicle being carefully protected. 2. The lower end of the vas is split and the inner epithelial surface sutured over the opening which has been made into the gland; the tunica propria of the testicle is next made to cover and invaginate the new communication. 3. The membranes and skin are reunited. The other method is as follows: 1. Partial removal of the epididymis. 2. Invagination of the divided vas into the slit remainder of the epididymis. 3. Closure of membranes and skin.

Direct Surgical Intervention in an Aneurism of the Arch of the Aorta.—TUFFIER (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxviii, No. 10).—The patient, a woman of forty years, had suffered at first from what was supposed to be intercostal neuralgia high up on the right side. Next a small pulsating tumor made its appearance between the second and third costal cartilages on the same side. Now an aneurism was apparent, and from the fact that the two radial pulses were alike, it was considered that it could have its origin, if from the aorta at all, only from that part between the heart and the innominate artery. Certain manifestations led the author to hope that it was a sacular tumor, hence after much study he determined to attempt to ligate it. A flap was made with its base on the sternum, and then with the exercise of the greatest care he succeeded in completely isolating the aneurism from all surrounding tissues and organs. When this was accomplished it was seen that it was indeed of sacular form, and hence it was easily possible to place a double catgut ligature around its neck. No untoward symptoms followed till the thirteenth day after operation, when the patient suddenly died of hemorrhage, which an autopsy showed to have been due to gangrene of the sack, this having been left in place after the ligation. It was further demonstrated that the diagnosis had been correct in every particular.

A Contribution to the History of Gelatin as a Hemostaticum.—MIWA (*Centralblatt fuer Chirurgie*, No. 9, 1902).—This subject was first mentioned in European literature in the middle of the last century, but the matter is in reality by no means so recent. Gelatin was used thus by the Chinese and Japanese as early as the second and third century after Christ. It was prepared from the hides of cattle and in the form of a powder or in that of a solution was blown into the nose to stop hemorrhage from that organ. Nothing was known of the subcutaneous or intravenous use of the material, but in addition to the application above mentioned, it was used also for bleeding from the rectum, vagina, mouth, lungs and urethra.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

French Methods of Reducing Fat.—E. H. KISCH (*Therap. Monatsh.*, No. 1, 1902).—The writer discusses in some detail the methods in use among French physicians of treating obesity. Dancel still upholds the now pretty generally discarded "thirst-cure." He considers pure water as the most harmful of drinks. The amount of fluid permitted an obese patient who desires to lose weight should not, according to Dancel, exceed 800 g., exclusive of two small cups of black

coffee, daily. According to our modern point of view, however, such a restriction of the amount of fluids taken in by obese patients cannot be universally or strictly carried out without grave danger. A "thirst-cure," like a "hunger-cure," may, to be sure, cause a rapid disappearance of fat, but the organism as a whole is seriously weakened at the same time. According to Kisch, this diminution of the amount of water consumed is distinctly contraindicated in the plethoric form of obesity—*i. e.*, the great majority of cases to which gourmands, the hereditary obese, alcoholics and women during the climacteric. It may be used to advantage, however, in anemic cases in which the hydremia seems to stand in some etiological relation to the obesity. The particular field for the systematic withdrawal of water, however, lies in that group of cases of obesity in which besides a hydremia, a pronounced degeneration of the myocardium has taken place. In such cases the cardiac insufficiency and the congestion of various organs can best be relieved by a procedure that diminishes the total fluids of the body.

Albert Rodin divides obesity into two classes according as the amount of urea excreted is greater than the normal or not. There would thus be two kinds of obesity, one in which cellular activity is increased and one in which it is diminished. The former group is characterized by an excessive nutrition and assimilation, the latter by the reverse. The treatment depends upon the group with which any given case is classed: those with excessive metabolism are forbidden to drink much water, whereas those with defective assimilation are encouraged to drink.

Germain See, on the other hand, advises all obese patients to drink plentifully, especially of coffee and tea. He has them drink warm tea at breakfast, and between meals water, lemonade and acid mineral drinks. As regards nutrition, he prefers a *regime* in which proteids and fats are combined in the normal proportions, *i. e.*, about 120–130 g. albumen and 60–90 g. fats daily, but in which the amount of carbohydrates is considerably diminished. Vegetables may be eaten *ad libitum*.

Bouchard emphasizes the importance of diminishing the amount of fat allowed an obese patient as the best means of obtaining a condition of under-nutrition. In order to obtain such a condition of diminished nutrition without at the same time depriving the organism of the quantity of proteids, carbohydrates, salts and fats necessary to health, he recommends that milk and eggs be made the mainstay of such a dietary, provided that they be not given in such quantities as to cause the income of the body to exceed its outgo. He prescribes for an average patient 1250 g. milk and five eggs divided into five meals; no other food or drink is permitted. The regimen continues for twenty days, and should produce a daily loss of 300–350 g. of body weight, in all some six to seven kg. This is followed by a period of several weeks during which the patient is permitted a somewhat more varied but still frugal bill of fare. In order to increase the metabolism he uses dry and aromatic skin friction, cold baths, sea-bathing, occasionally hot baths and other hydropathic procedures.

Dujardin-Beaumetz inclines to the Oertel-Schwenninger regimen. His dietary permits 55–60 g. albumen, 30–40 g. fat and 95 g. carbohydrates. As regards fluids, he permits the patient to drink 300 g. during each meal; if, however, the patient abstains from fluid during meal time he may drink considerably more. He forbids absolutely liquours, brandy and beer, but occasionally permits a cup of black coffee after breakfast. As regards foods, those containing much water, especially soups, are forbidden, whereas eggs, fish, meat, green vegetables are preferred. Those varieties of bread that contain much crust are permitted, whereas sweet cake is forbidden.

Proust and Mathieu divide their dietary for obesity into three stages. The first contains the number of calories necessary to maintain the normal body in a condition of unchanged weight. It contains 100 g. proteid, 45 g. fat and 320 g.

carbohydrates when the body is at rest; if much exercise is taken, 110–120 g. proteid, 50 g. fat and 400 g. carbohydrates. This dietary will produce a decrease in weight in patients who have been accustomed to a very rich diet. If it does not produce the desired result, they proceed to the second stage, consisting of 100 g. proteid, 45 g. fat and 300 g. carbohydrates; and if this does not suffice, the third stage, consisting of 100 g. proteid, 30 g. fat and 135 g. carbohydrates, is entered upon.

Dumont prescribes the following dietary for the usual type of obese patients, 25 to 40 years old and threatened with fatty heart. Articles usually permitted: clear soups, especially with *fines herbes*, fried red meats, roast beef, smoked tongue, ham, kidneys, boiled meat, white meat, fowl, veal, rabbit, fish, oysters, green vegetables, lettuce, asparagus, artichoke, cress, radishes, champignons, raw and stewed fruit in large quantity; as regards drinks, tea, skim-milk, one bottle of light wine daily.

Foods permitted but only in small quantity and occasionally: bread, crackers, pork, fat fish (such as eel, carp, herring), brain, sweet-bread, caviar, preserves, spice, vinegar, cake, bouillon, eggs, butter, cheese, rice, cauliflower, carrots, spinach, tomato, celery, potatoes, ice cream, figs, nuts, light beer, rich milk, coffee, champagne, liquor.

Forbidden foods: sweets, hot bread, macaroni, tapioca, sago, thick soups, fat meats, ragouts and the like, gelatine, liver, oil, rich gravies, sugar, honey, chocolate, pudding, syrup, dark beer, sweet wines, cognac, etc.

He advises that only three meals daily be taken and nothing be eaten between meals. The total amount of fluids should not exceed one liter daily. Of bread not more than 200 g., meat 300 g., fruit and vegetables 500 g., are permitted daily. Moderate exercise and stimulating hydiatic procedures are advised. Smoking is forbidden. The patients should not sleep after meals, and only seven to eight hours at night.

At first sight the diversity of the procedures recommended by the various authorities is most confusing especially when compared with the German methods (see the previous number of this journal). Doubtless all of these men have had good results with their procedures. The kernel of the matter seems to be that the treatment of obesity depends essentially upon the individual patient. The method must always consist in making the outgo of the economy exceed the income. But whether the chief attention is devoted to increasing the former by means of exercise, massage, hydiatic procedures, etc., or to diminishing the latter by means of a stringent dietary, must depend on the nature of each individual case. One thing, however, seems certain, that the discomforts and dangers attending a rigid restriction of the fluids taken into the body are so great that this method should be used very cautiously if, at all.

Aspirin.—KARL GASSNER (*Klin.-Therap. Wochenschr.*, No. 51, 1901; *Centralbl. f. d. Ges. Therapie.*, No. 4, 1902). JØRGEN THESEN (*Die Heilkunde*, No. 2, 1902).—Among the more recent medicaments few are becoming more popular than aspirin. It consists merely of salicylic acid in which one atom of hydrogen has been replaced by an acetyl group. The latter changes the substance in so far as to make it quite insoluble in acid menstrua, whereas alkaline fluids break it up into salicylate and acetate, both of which influence favorably rheumatic and allied conditions. Accordingly, aspirin ordinarily passes through the stomach entirely uninfluenced by its acid contents, and is broken up and absorbed only after reaching the intestine. This accounts for the observation that it usually does not produce the gastric and other disturbances so often met with in the administration of the salicylates. Occasionally, however, in cases of pronounced anacidity, or if taken immediately after eating when the gastric contents are alkaline, it may be split up in the stomach and produce disturbances there. In

such cases small amounts of HCl may be administered with it or it may be given at such times when we may expect the gastric contents to be acid.

Gassner usually prescribes the drug as a powder in wafers or in tablet form. He uses it not only in cases of acute and chronic rheumatism, neuralgias, sciatica and gout, but also in febrile conditions. Its effects were always strikingly good, often distinctly superior to those produced by sodium salicylate. In influenza the pains yielded promptly, the general condition was improved, and the duration of the illness seemed markedly shortened. In mild cases he prescribes 1 to 2 g. every evening, this is usually followed by a quiet sleep and by prompt recovery. In more severe cases, 3 to 4 g. daily, usually given in the afternoon and evening, are necessary. The author ascribes the satisfactory effect of aspirin firstly to the fact that the unpleasant secondary disturbances characterizing the salicylates are avoided, and secondly to the observation that aspirin does not depress the heart. The observation of Philippi, that aspirin is excreted more slowly than the salicylates, would explain its prolonged effect as compared with the latter. As regards diaphoresis, aspirin seems less efficient than sodium salicylate.

Its superiority over its allied drugs as an analgesic is also striking. This is especially shown in cases of acute articular rheumatism and of neuralgias, especially of the trigeminal and intercostal type, where one or two doses of 1 g. each sufficed to produce relief. In acute sciatica Gassner always obtained satisfactory results; this was, however, less the case with the chronic form. In acute gouty attacks aspirin cut short the pain very promptly, but here 3 to 4 g. pro die must be given. A coryza may be aborted if 1 g. is taken at bed-time; if the coryza be already pronounced, aspirin will shorten the duration of the attack. In such cases 1 to 2 g. at bed-time usually suffice.

Thesen has used aspirin on a large material at the government hospital in Christiania. He found it useful wherever the salicylates were indicated, especially in polyarthritis and pneumonia. In afebrile rheumatoid affections and in cardiac complications it was, however, just as inefficient as sodium salicylate. He had very satisfactory results with aspirin in pleurisy: the exudate was absorbed more rapidly than with any other drug and the duration of the disease seemed unmistakably shortened.

The abstractor can unhesitatingly endorse the findings noted above. Only as regards the absence of a depressing influence upon the heart must he differ with Gassner. In a number of cases in which 3 to 4 g. were administered daily, cold sweats and a feeble pulse appeared, just as after the use of large doses of the other coal-tar antipyretics.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Coccidium Infection of the Rabbit's Liver.—E. E. TYZZER (*The Journal of Medical Research*, April, 1902).—This disease is of common occurrence among domestic rabbits. In some rabbitries the large number of the animals are affected to greater or less degree. The object of this investigation was to throw light on the nature of the coccidium infection, especially as regards tumor formation. Tyzzar found that parasites, of varying form and character, are found in certain lesions of the liver of the rabbit. The various forms represent the life cycle of a definite species of Sporozoon, coccidium oviforme. The necessary stages of the life cycle are traceable. In only one stage does the parasite resemble the cell-inclusion of cancer. Even this stage presents a definite and con-

stant morphology. The immediate effect of the parasite upon the host is to produce degeneration and destruction of the epithelial cells of the bile ducts. Secondary to this, the effects of irritation are seen in the proliferation of connective tissue and epithelium. The more remote changes are those of cirrhosis. Repair is effected through the walling off of the process by connective tissue, by the destruction of the remaining parasites, and finally by cicatrization.

There is no well-founded analogy between the cell-inclusions of cancer and any one of the stages in the life history of *coccidium oviforme*. The lesion is of the nature of a chronic inflammatory process, the tissues reacting to the irritation which the parasites cause by their presence in the bile ducts. Repair takes place when the irritation is removed. It is a kind of physiologic process and has nothing in common with new growths. No metastases are formed. The process is self-limited and repair follows the destruction of the parasites.

Molluscum Contagiosum.—CHARLES J. WHITE and WM. H. ROBEY (*The Journal of Medical Research*, April, 1902).—These writers give an interesting review of the literature bearing on the subject of molluscum contagiosum, setting forth in detail the numerous theories that have arisen concerning the true nature of the process. They give an account of the work of those who believe in the follicular or sebaceous origin of these tumors. This was the theory of Virchow, Rokitan-sky, and Kaposi. Bizzozero, Klebs and Unna believe that the tumors originate from the rete Malpighii. Some believe that the disease is contagious, such as Vidal, Virchow, Bizzozero and many others. Others claim, however, that it is non-contagious. Kaposi denies that it is a contagious process. Virchow and others after him have asserted that the bodies found in the tumors, and which can be expressed by pressure, are degenerated epithelial cells. Klebs, Benda and Neisser assert that the bodies found in these tumors are parasites. Angelucci described in 1881 a bacterium—the bacterium *lepogenum*—which he claimed was the cause of the new growth. In 1882, Neisser denied this and claimed that the specific cause of the tumor was a gregarin, and claimed, further, that the peculiar bodies were the shells of these organisms.

White and Robey studied several hundred sections cut from tumors sent them by Drs. Stelwagon and Shepherd. They describe very accurately the minute changes in the tumor. The new growth is formed by a hyperplasia of the rete cells which push the mass downwards and outwards, thus producing a globular tumor. Very often the growth is the result of a combination of two or three down-buddings of the rete Malpighii. The lowest layer of cells present characteristics of quasi-normal spinous cells described in the surrounding skin. These cells stain deeply and are nucleated. Others are present which are not nucleated and are composed of fibrillary protoplasm. Above these cells are others which have lost their primary shape, having their nuclei distorted and becoming masses of reticulated protoplasm, receiving only the basic colors.

The so-called molluscum bodies were found to be simply keratin, identical with the horny layer, except in the shape of individual cells. These abnormal conditions cannot be called colloid or hyalin degeneration, for the staining reactions throughout the depth of the tumor were normal, or show a rather extraordinary metamorphosis of rete cells into normal keratin.

The bacteriologic results in these cases were obtained by excising pieces of the tumor with antiseptic precautions, sowing them in bouillon and sealing the tubes with paraffin. These starch-like granules spoken of before were squeezed out and put into bouillon tubes. A special medium made of human skin was also used with the idea of producing artificial growth conditions somewhat like those enjoyed by any bacterium that might be the cause of molluscum contagiosum. The medium was made of finely chopped human skin, free of fat. The only organism found by all the means used was the staphylococcus *epidermidis albus* of Welch.

The conclusions of these writers are that no one has so far found any parasitic cause of the disease, and that the change is not a colloid or hyalin degeneration, but rather an extraordinary metamorphosis of rete cells into keratin.

Culture Experiments with Malignant Tumors, 1900-1901.—OSCAR RICHARDSON (*Journal of Medical Research*, April, 1902).—This is a continuation of the report of 1899-1900 of the research work done in regard to culture experiments with carcinomatous tissue. The cultures were made from material obtained in the Massachusetts General Hospital, in most cases, as soon after operation as possible. The method of taking the culture material from the new growth is essentially that already described, excepting that the writers used a glass tube with a rubber bulb at one end, which enables one, by pressing the bulb and introducing the free end of the tube into curetted pulpy semi-fluid mass of the new growth, to suck up into the tube any desired quantity of the fluid. The tube and bulb are easily sterilized.

Media used: Bouillon and agar made from human liver; tartaric acid glucose bouillon (recommended by Sanfelice for the cultivation of so-called blastomycetes); litmus milk; Dunham's peptone solution. A table is given by these writers showing that growth was negative in every instance, both under aerobic and anaerobic conditions, employing all these different media. All of the cultures were observed for at least fifteen days and some for months. They were subjected to regular macroscopic and microscopic examinations, and from many of them subcultures were made.

The result of these investigations confirms the report of the previous experiments—*i. e.*, that it is impossible to cultivate from the tissues and fluids of malignant new growths anything which can be regarded as a specific infecting organism.

The Relation of Blastomycetes to Cancer.—E. H. NICHOLS (*The Journal of Medical Research*, April, 1902).—Nichols reviews the literature on the so-called parasites of cancer, and sets forth in extended detail results obtained by him in looking for organisms in malignant growths. He made an accurate examination of the lesions produced by the inoculation of animals with Sanfelice's "neoformans" and with the organism ("saccharomyces") isolated by Plimmer from a human cancer. Nichols was furnished with a culture of these two organisms by these two investigators. Each organism was transferred to various media and grown in pure culture. Eighteen animals were inoculated with Sanfelice's "neoformans" and twelve with Plimmer's organism. Of the animals inoculated with the "neoformans," six were rabbits and the others guinea-pigs. One animal inoculated with Plimmer's organism was a rabbit, the rest being guinea-pigs. It was seen that certain blastomycetes can live and multiply in human and animal tissues, produce local lesions and metastases in the internal organs—*i. e.*, they are pathogenic. The lesions produced in animals by spontaneous infection with blastomycetes are acute inflammations, abscesses or nodules, composed of peculiar granulation tissue, and are not in the least analogous to cancers. The lesions produced in human beings in cases of spontaneous infection with blastomycetes are acute inflammation (abscesses or ulcers) or proliferation of endothelium and connective tissue. At times a proliferation of the epidermis does occur, but this is not due to the action of the blastomycetes, but is secondary to the chronic inflammation of the underlying corium. The proliferation of the epithelium is not analogous to the proliferation of the epidermis in cancers, since no epithelial metastases occur.

Blastomycosis in human tissue is very rare. The lesions produced in animals by experimental inoculation with blastomycetes are, with the exception of Sanfelice's successful cases, inflammation or nodules of peculiar granulation tissue. Sanfelice's cases are not conclusive in themselves, are in direct opposi-

tion to the results obtained by others, and even if true, are logically explained as coincidences, and not as results. Blastomycetes have a slight toxic power and therefore produce marked proliferation of tissue, and little infiltration with leucocytes. Blastomycetes primarily extend along lymphatic clefts and vessels. Sometimes blastomycetes are taken into the blood vessels, disseminated throughout the body and produce a general infection and metastases. The secondary nodules have the same general character—*i. e.*, the formation of granulation tissue—as the original nodules. The morphology of the so-called “cancer bodies” is not identical with that of the blastomycetes. Blastomycetes are not constantly present in human malignant tumors and cancers. Even if they do occur in human cancers, they are not present in such numbers and in such a relation to the anatomical lesion as to justify the belief that they are the cause of the disease. All of these facts lead to the ultimate conclusion that there is no evidence that blastomycetes have anything to do with the production of human cancers.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Diabetes and Pregnancy.—ERNST HERMAN (*Edin. Med. Jl.*, February, 1902).—If diabetes occurs in a woman of child-bearing age, it usually suppresses menstruation, and often produces atrophy of the uterus. In some cases, however, menstruation continues; such patients may become pregnant. Since diabetes in young subjects is of a more severe type, those diabetic women who are still capable of becoming pregnant exhibit a dangerous form of this disease. Pregnancy aggravates it and hastens its progress. If diabetes becomes associated to pregnancy, *viz.*, if a pregnant woman becomes diabetic, the prognosis is more favorable, because the diabetes usually subsides after confinement. The effects of diabetes upon pregnancy and puerperium are extremely deleterious. In about two-thirds of the cases intrauterine death of the child was observed. Hydramnios is a frequent complication. During the lying-in death may supervene in the same manner as after operation, with the symptoms of coma and collapse. The obstetrical management of diabetes with pregnancy is a very difficult problem. The author believes that the termination of pregnancy, and that, too, at the earliest possible date, is the only course which can logically be followed.

Expulsion of Dermoid Ovarian Cyst per Vagina During Labor.—F. W. N. HAULTAIN (*Journ. of Obstr. and Gyn. of Brit. Emp.*, April, 1902).—Patient, 3-para, aged thirty-two, had been in labor for twenty-four hours, and the membranes had ruptured twelve hours previously to her admission to the hospital. An attempt at delivery by means of the forceps had been made, with the result that a mass had protruded from the vulva. On examination the mass was found lying in the vagina, and being grasped to pull down for inspection it became detached and was removed. Forceps was immediately applied to the engaged fetal head, and a living male child was easily delivered. The third stage presented nothing abnormal. A new examination revealed a rent in the posterior vaginal wall through which this tumor, a dermoid cyst, had been pressed by the advancing head of the fetus. The tear in the vagina was now packed with a strip of iodoform gauze. The progress of the patient was one of uninterrupted recovery. Gradually the strip was removed within the following four days. The author concludes this interesting report with a review of four similar cases known in literature. The practical conclusion drawn by the writer is, that in

cases of obstruction of labor by an ovarian tumor in the pelvis, the forcible delivery, *e. g.*, by means of the forceps, involves a great danger and should never be attempted.

Stab Wound in Gravid Uterus.—VORHIES LUCAS and N. McCABE (*West. Med. Review*, March 15, 1902).—Patient, aged thirty-five, multipara, in the eighth month of pregnancy, was stabbed by her husband. The wound in the abdominal wall was three inches long, beginning at median line, three inches above the symphysis pubis, extending upward and to the right, passed the uterine wall, making a one and a half inch opening, evacuating the amniotic fluid and cutting right arm of the fetus. Wounds in uterus and abdominal wall were sutured. About four hours later labor pains began, tearing out the sutures. Laceration of the uterus seemed imminent. Therefore Cesarean section was performed in the middle line in typical way. The hemorrhage was slight, the cavity of the uterus swabbed out with gauze and the incision closed with silk sutures. The wound in the abdominal wall was partly closed and a drainage left in the lower angle. Recovery was uneventful, the temperature only once going above 100. Child alive. The writers consider their plan of treatment, which was entirely expectant in the beginning, justified by G. Gellhorn's review of eighteen cases of gunshot wounds of the pregnant uterus. [Gellhorn says, however, in the conclusions of his article: "From all the foregoing I would deduce the rule for treatment that in every case of gunshot wound of the pregnant uterus, *Cesarean section should be performed at once.*"—Ed.]

Shall We Operate Upon Myomata per Vaginam or per Abdomen?—A. MARTIN (*Centrabl. fuer Gyn.*, April 5, 1902).—In former times, when the indication for operation in myoma was alone found in an immediate danger of life, the abdominal way was the only feasible one. To-day the uselessness of almost all the non-surgical therapeutic measures is recognized; the danger of the operation, on the other hand, considerably reduced. According to modern understanding myomata are benign from the standpoint of the histo-pathologist, but not from that of the clinician. The degeneration of the heart muscle in cases of myoma of the uterus, malignant degeneration in the myomata and similar unfavorable complications are now well known. Therefore we must conclude that operation is justified in all cases in which the health or the ability of attending to work is noteworthy impaired, and in which a medicamentous treatment has proven ineffective. For an operator who is guided by these reflections and who does not limit himself to the extirpation of large myomata only, the vaginal way is, in the majority of cases, the more preferable. Martin emphasizes how of late this view has taken root and is sustained by men like Fritsch, Thorn and others. The abdominal route should be adopted where adhesions with the adjacent organs may be assumed to exist from the history of the case (precedent inflammations), from the symptoms (localized pain), and from the examination (immobility of the tumor, changes on its surface). The limit for the less experienced in vaginal operations should be for the vaginal route, a tumor of the size of a uterus of six months' pregnancy. The operation is facilitated by the vaginal-perineal incision after Schuchardt (see April number of this journal, page 215). The vaginal route offers just as well as the abdominal, to the operator, the choice between conservative extirpation of the myoma or total extirpation of the uterus. If the author finds one or both ovaries in normal condition, he prefers to leave them. Out of 118 operations performed for myoma during the last three years the author operated per vaginam 87 times, removing the whole uterus in 35 instances (without mortality), and enucleating myomata in the remaining 52 cases (with two deaths from catgut infection).

Causes of Salpingitis Other Than Gonorrheal.—J. B. DEEVER and E. KEMP MOORE (*Am. Journ. of Med. Science*, March, 1902).—The proportion of cases of

salpingitis and pyosalpinx due to gonorrheal infection has been placed by various eminent authorities all the way from twenty to eighty per cent. One of the most important causes of non-gonorrheal salpingitis is the "terrible douche habit." By its too constant use the vagina is robbed of its natural protection against infection, and carelessness in asepsis often implants an infection. In a case, known by the authors, a gonorrheal infection was transmitted from a servant girl who had a virulent gonorrhea and had used the syringe of her mistress. Minor gynecological operations are responsible for many acute exacerbations of latent diseases of the tubes. Acute inflammations are not so rarely produced by a simple dilatation of the uterus, a prolonged intrauterine treatment, or a curettment. Post-puerperal infection is often the cause of the development of a salpingitis. In a large percentage of cases of appendicitis in the female, in the author's opinion, the right fallopian tube is infected. Tubercular salpingitis is occasionally met with. It was found but once in forty consecutive cases of salpingitis subjected to microscopical examination.

The wide-spread view that salpingitis and pyosalpinx are always due to a gonorrheal infection is dangerous and needs rectification from a sociological standpoint.

ORTHOPEDICS.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

Cases of Rupture of the Spinal Ligaments.—CHAS. F. PAINTER and ROBT. B. OSGOOD (*Trans. Orth. Association*, 1901).—Four cases are reported of injury to the spine in which there was kyphosis without tuberculosis or other disease of the vertebræ: in which there were symptoms of pressure on the cord, which pressure symptoms were relieved and the patients entirely recovered after treatment with plaster or leather jackets was commenced. Eighteen cases in all are tabulated, and the following conclusions are drawn:

1. Spinal ligaments during life may be ruptured without fracture or dislocation.

2. Nerve-pressure symptoms may occur from a simple flexion of the vertebral column.

3. Recovery in these cases requires prolonged rest in a position which favors the repair of ligaments, and that the effects of treatment speaks more for the ligamentous rupture than luxation or fracture.

4. The force which commonly produced the injuries (when stated) was one which, *a priori*, would be most likely to produce ligamentous rupture.

Caries of the Spine: An Analysis of One Thousand Cases.—J. HILTON WATERMAN and CHARLES H. JAEGER (*N. Y. Med. Journal*, November 9, 1901).—There were 535 males and 465 females. The dorsal region was most frequently diseased, the tenth dorsal vertebra in over ten per cent. of all cases. In over ten per cent. a tubercular family history was obtained. Abscesses were recorded in 158 cases, which is much less than in Vulpius' tabulation, where twenty-five per cent. had abscesses. Paraplegia appeared in forty-one cases, and fifty cases had tuberculous complications, a focus in some other joint or bone. There is a comparison throughout with the Vulpius statistics of 6586 cases.

Acute Anterior Poliomyelitis Among Adults on the Island of Guam.—ALF. G. GRUNWELL (*Report Surg.-Gen'l U. S. Navy*).—This epidemic raged over the island at the same time cerebro-spinal fever was epidemic throughout the world, but was regarded as distinctive because of the constancy and character of the

paralysis and atrophy (groups of muscles rather than whole limbs); the total absence of paralysis of any of the cranial nerves; the total absence of psychical symptoms; the absence of petechial or other skin eruptions; the infrequency of orthotonos and opisthotonos; and freedom from headache; the complete abolition of the reflexes. Everyone who contracted the illness but escaped death was left with some member of his body paralyzed, the paralysis usually coming on suddenly, but occasionally taking a week to develop. Atrophy invariably accompanied, but there was a tendency toward later improvement.

The Effect of Osteitis of the Knee on the Growth of the Limb.—HENRY L. TAYLOR (*N. Y. Med. Journal*, April 19, 1902).—It has recently been shown that retardation of the limb is an important cause of shortening after osteitis of the hip in children. When the tubercular process affects the knee-joint, the results are somewhat different. In processes involving long reparative activity near the piphysal lines, lengthening of the affected bone may result. Out of 116 cases Gibney and Berry found lengthening of the limb in sixty-two per cent.

The author measured the femora and tibiæ, the feet and patellæ in forty cases, and grouped them according to the duration of symptoms: less than three years, between three and five years, and more than five years.

The results show that:

1. Gonitis in childhood usually causes lengthening of the limb when approximately straight, and this may persist for eight years or more.

2. This lengthening is mainly due to overgrowth of the femur, and may be often detected within six months of the onset. In adolescents and adults after cessation of active disease, begun in childhood, the femur and limb may be considerably shortened.

3. The tibiæ are usually equal in length in the early stages; afterward the affected tibia may be slightly longer for a time, but is more often shorter, even in the first two years. This shortening increases in the older cases and after subsidence of inflammation.

4. With limbs of equal length and a duration of disease of several years the femur of the affected side will be found longer, the tibia shorter than its mate.

5. The feet and patellæ show a difference in favor of the sound side after a years' duration, and often before.

6. Stimulation of growth at the lower end of the affected femur, and more rarely and in less degree of at the upper end of the tibia, is usually accompanied by retarded growth in other parts of the limb; growth in the femur itself is finally retarded, and the final result, after many years, may be considerable shortening of the tibia, femur and limb.

Tubercular Spondylitis and the Compensation of the Kyphos.—J. FINCH-CHARKOW (*St. Petersburg Med. Wochenschr.*, 1902, vol. xix., No. 12).—The three factors usually considered as forming the boss are (1) the trauma, which may, but is not likely to, break the spongy body of the vertebra; (2) the reflected muscles, which are not considered a very important factor, inasmuch as in the dorsal region there is an almost entire absence of muscle along the bodies of the vertebræ; but here we see the greatest deformities. In the region of the psoas contracture is not found except with abscess formation, and in these cases the flexion on the thigh would be a necessary accompaniment, which is not always the case, even in bad lumbar deformities. After thus excluding these two points, the third and most important influence is the superimposed body weight. This makes the author consider all forms of treatment useless except rest in the reclining posture, with pads beneath the diseased vertebræ. Forceful correction is practiced in those cases with recent deformities. Plaster jackets are only used in these manipulated cases. Some cases are reported with no recurrence after one and a half to two years without wearing jackets, having been treated entirely by rest in bed.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Epistaxis in the Newly-Born.—D'ASTROS (*Archives de Medicine des Enfants*, April, 1902), in a review of this subject, concludes that this symptom always depends upon infection. Hereditary syphilis, either with or without local nasal lesion, is the most frequent cause. In some cases a septic infection underlies the condition. Not infrequently we have the association of syphilis and sepsis. When in the newly-born epistaxis appears to be idiopathic, careful examination for signs of latent syphilis should be made. The amount of hemorrhage is rarely large, still more rarely dangerous. Its gravity comes from its underlying cause, toward which the therapy should be directed.

Middle Ear Inflammations in Children and Their Relation to Deaf-Mutism.—KING (*Pediatrics*, April 1, 1902), calls attention to the great frequency of middle ear disease in childhood, and its dangers. The etiological factors would appear to be (in the order of their importance) adenoid vegetation and other diseases of the naso-pharynx, and the acute infectious diseases.

Of 46,532 ear cases collected from various hospitals, 149 terminated fatally, a mortality of 0.32 per cent.; and 40,073 autopsies in Vienna showed 232 deaths from otitic complications, a mortality of 0.58 per cent.

But, aside from the fatal terminations, ear disease has one dread sequela. According to King, in the large percentage of deaf people the majority can trace their infirmity to ear disease during childhood.

The severer forms of deafness gave rise to what is known as acquired deaf-mutism. It is estimated that one-half of all deaf-mutes come in this category. The child learns speech by imitating the speech of others, so that if the sense of hearing be destroyed, the child fails to develop speech power and remains dumb. If deafness supervene before the seventh year, deaf-mutism is almost certain to supervene.

The author insists upon the necessity for the careful treatment of ear disease in children, as a prophylactic against the development of a subsequent deaf-mutism.

Lobular Pneumonia in Infants.—SHEFFIELD (*The Post-Graduate*, April, 1902) claims excellent results in this condition from the following active course of treatment: Moderate doses of spts. etheris nitros. and liq. ammon. acet. are given at once. A poultice is then made up as follows: Five parts each of flax-seed meal and camphorated oil, one or two parts of mustard, and a sufficient quantity of *boiling* water to make a thick paste by thorough stirring. This mass is spread on thin gauze and applied snugly to chest and back. Child is then wrapped in an oil-skin covered cotton jacket and in a blanket. The poultices require renewal but three or four times in twenty-four hours.

In addition, expectorants, stimulants, nerve-sedatives and alteratives are resorted to as needed. Of the stimulants, strychnia is by far the best. Later on in the disease (about the sixth day) sodium iodid is given. If there are any signs of pleurisy the following ointment is applied: One part each of gaultheria oil, guaiacol and ichthyol, and four parts of iodine ointment. This ointment relieves pain and promotes absorption, and the author believes that by its use he has frequently succeeded in preventing pyothorax.

Cure of Prolapse of the Rectum in Children.—BAUMEL (*Arch. de Med. des Enf.*, April, 1902) concludes that cough, especially if it be persistent, and chronic diarrhea, are the most frequent causes of this condition, it being noted that the anatomical conformation of rectum and sacrum in the child favors such a condition.

In his experience surgical intervention, even in the severest cases, is not necessary. He reports that in cases where the knife, the thermo-cautery, and the local application of caustics (such as silver nitrate) had failed, he achieved excellent results by careful search for the cause, and by directing treatment as long as necessary to this, without any local treatment whatever.

Pyloric Stenosis in Infants.—SAUNDERS (*Archives of Pediatrics*, April, 1902) reports five cases of this rather rare anomaly.

The clinical phenomena are fairly uniform, and in the later stages, at least, the diagnosis is not difficult.

At a certain period after birth, propulsive, uncontrollable vomiting in larger quantity than can be accounted for by the previous feeding, occurs. Obstinate constipation ensues; the infant loses weight rapidly.

On inspection, the upper zone of the abdomen is seen to be bulging, the bulging subsiding after a paroxysm of vomiting. With thin abdominal walls peristaltic waves may be visible.

Gastric dilatation, with resulting catarrh, ensues. Stomach contents show evidences of decomposition, with presence of organic acids.

Post mortem: the pylorus is found much thickened and stenotic.

Of the author's cases, only one resulted fatally. The others were of a milder character, and the author calls attention to the intermittent character of the symptoms. He concludes that pyloric spasm is a factor of importance in the production of the emesis; indeed, Pfaundler holds that it is the principal cause of the symptoms. This spasm is sometimes due to a marked hyperacidity of the gastric juice, and it is noticeable that these cases improve when fed on whole milk, which neutralizes the excessive acidity. The author reports such a case. Whenever persistent vomiting occurs, therefore, the presence or absence of hyperchlorhydria must be established.

In cases without excessive acidity, the infants should be fed on whey mixtures or peptonized milk, in order to diminish the amount of curd in the food, which has to pass the narrowed pylorus.

In addition, drugs should be used to overcome the pyloric spasm, notably belladonna, bromides and chloral.

The secondary gastric irritation should be treated by washing out the stomach and giving it rest (rectal feeding).

If, in spite of these measures, there is no improvement, surgical intervention must be advised.

Rubella and the "Fourth Disease."—J. P. CROZER GRIFFITH (*Philadelphia Medical Journal*, April 12, 1902) concludes, from a study of the evidence adduced by various writers (especially Clement Dukes), as well as from his own experience, that there is no justification for the separation of the "fourth disease" from rubella.

He believes that we have two types of rubella, viz.: R. scarlatiniforme, R. morbilliforme, which do not confer immunity against measles or scarlet fever, but do protect against each other.

He sees "no possible reason for, and every reason against, the assumption of a 'fourth disease.'"

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Pulmonary Embolism After Operations Upon the Bladder and Prostate.—KEYES, JR. (*N. Y. Med. Jour.*, April 5, 1902).—It is suggested by the author that pulmonary embolism after operations upon the bladder, and especially upon the prostate, is a more frequent cause of death than is generally supposed. He has collected ten cases from literature whose death appears to be due more or less to this complication. If these fatalities can really be attributed to pulmonary embolism, then it is the cause of sixty-six and two-thirds per cent. of the mortality in Dr. Keyes' practice since 1894, and of fifty per cent. of the mortality after Bottini's operation at the hands of Dr. Willy Meyer, a percentage which should attract grave consideration, more especially since it may happen in spite of rigid asepsis. To what is it due and how can it be prevented? The author has no answer, but trusts it may be suggestive.

Neglected Methods for the Sterilization of "Gum-Elastic" Catheters.—COTTON (*Boston Med. and Surg. Jour.*, March 27, 1902).—After numerous experiments, lasting over a period of six months, Cotton makes the following statement:

"As a result of these tests I am ready to claim that all the gum-elastic catheters, bougies, and filiform bougies ordinarily sold, may be boiled repeatedly and for long periods in saturated (or something less than saturated) solutions of ammoniac sulphate or sodic chlorid without essential damage. New instruments show no damage whatever, used instruments only a deterioration that is of no great consequence."

Movable Kidney, with Possible Explanation of Failure in Some Cases to Relieve Symptoms by Nephorrhaphy.—MALLETT (*American Med.*, March 29, 1902).—From cases of movable kidney which have come under the observation of the author in which the nephorrhaphy has fixed the organ, but failed to relieve the symptoms, he is led to believe that the kidney has been fixed in a malposition, and that torsion or dragging upon its ureter, vessels and nerves may be produced in the fixation as well as by its previous mobility. When the means of suturing employed is that generally used in the customary operation of splitting the capsule along its convex border and dissecting it off on each side, this malposition consists in an outward rotation of the organ on its vertical axis; that is, the convex border is stitched too far backwards, thus causing the pelvis and its vessels to be tilted forward and obstructing the vessels and ureter.

Transplantation of the Ureters Into the Rectum for Exstrophy of the Bladder—By the Author's Extra-Peritoneal Method—Three Additional Cases.—PETERS (*Can. J. Med. and Surg.*, April, 1902).—The author's method of operating may be briefly stated as follows:

Having passed catheters into the ureters, their distal ends, together with a fair-sized rosette of the adjacent mucous membrane and muscle wall of the bladder, are dissected out and freed on both sides. The lateral walls of the rectum are now laid bare by blunt dissection. Pass a pair of forceps into the rectum and press the instrument against the lateral aspect of the bowel just above the internal sphincter. A slight cut over the end of the forceps allows it to pass through. After dilating this opening slightly so that it will receive the ureter with its catheter snugly, and yet without compression, the forceps is made to grasp lightly the end of the catheter and this is drawn through the rectal wound

and out of the anus. The forceps is then passed back beside the catheter through the same opening and made to grasp lightly the rosette of bladder tissue with the ureter, and this is now carefully conducted through the opening and made to protrude into the rectum, forming a veritable papilla. The same tactics are repeated on the other ureter. No sutures are used, but, instead, the wounds about the ureters are fairly firmly packed with iodoform gauze.

For treatment of the exstrophied bladder tissue, the mucous membrane is dissected away and the wound allowed to heal by granulation, or else a plastic operation is done, according to the extent of the exstrophy.

The author reports four cases—three of them recovering and remaining well and one dying five days after the operation from acute ascending infection.

He regards the papilla formed by the ureter projecting into the rectum as a real and efficient valve for preventing ascending infection, and believes that the rapidly fatal ascending infection in the one case of death could have been prevented had he made the implantation without using catheters in the ureters, as these held the ureters open and prevented the valve action. He advises discarding the catheters in future cases.

From the point of view of the comfort and happiness of the patients, the result in his successful cases leaves nothing to be desired. They are able to retain their urine almost as long, and apparently quite as comfortably, as in the normal bladder. In none of the cases is there any ascending infection, the observation in one case extending over more than two and a half years.

Cyclic Albuminuria.—HUGER (*Bul. Johns Hopkins Hosp.*, April, 1902).—The history of two cases observed by the author are given, and after considering the literature of the subject, the pathology, etiology and prognosis, he concludes, in part, that there are two classes: (*a*) Those few which develop a continuous albuminuria, and (*b*) the vast majority which get well. Continued rest in bed is advised. Huger believes that by a *very careful* examination for casts a large percentage of cases will be found to contain them, and that the serious prognosis given because of their presence will be modified.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

The Treatment of Acne Vulgaris.—LEREDDE (*Gazette des Hopitaux*, March 25, 1902).—Acne vulgaris is a microbic affection of the skin, that is to say, that the lesions by which it reveals itself are due to the proliferation of microbes in the mouth of the follicle, in the follicle or deeper down in the glands and tissue about the glands. This definition permits us to understand the role of local therapy. Disturbances of nutrition, intestinal, gastric, probably furnish a soil for the propagation of the organisms.

It is admitted to-day that acne vulgaris is developed as a complication of the seborrheic state, therefore the preventive treatment of the disease is that of seborrhea.

Acne vulgaris may be divided into acne puncture (*acne punctata*) and acne inflammatoire (inflammatory). The former is characterized by the presence of comedones and diffuse hyperkeratosis; the latter by nodules of various sizes, depths, with or without suppuration, and whose center is a pilo-sebaceous opening. The symptoms vary as to the quality of the skin of each patient, and are also influenced by secondary infection.

The author discussed in the usual manner the necessity of treating the general health and the correction of any gastro-intestinal disturbance; the hygienic conditions; the advantages of the daily hot bath as a stimulant, and the great care necessary in selecting a proper chemical agent to suit the case, remembering the quality of reaction in each case.

For the treatment of seborrhea he recommends several reducing agents, namely: sulphur, mercury, ichthyol. Besides these, keratolytics are used.

Sulphur is the foremost agent in the antiacne treatment (seborrhea), and should be used in pastes, as it is irritating in lotions and dangerous in pomades. Before using sulphur the grease of the skin should be removed to allow the deeper penetration of the sulphur; for this is recommended:

R	Sodii caustique.....	1.0
	Water.....	300 to 500.0
M.	Sig.—To be sponged over face.	

In acne punctata the keratolytics, resorcin and salicylic acid are used in the form of a paste, something after the following formula:

R	Vaseline.....	25.0
	Zinci ox.....	12.0
	Amyli.....	12.0
	Ac. salicylic.....	1 to 2.0
	Resorcin.....	0.50 to 1.0
M.	ft. pasta. Sig.—To be smeared on after soaping and washing the face.	

In inflammatory acne, the diffuse superficial form with crusts, suppuration and redness, soothing lotions and pastes of sulphur or ichthyol in the intervals are indicated.

The Study of the Cases of Accidental X-Ray Burns Hitherto Recorded.—E. A. CODMAN, M. D. (*Phil. Med. Jour.*, March 15, 1902).—After a thorough study and review of the literature upon this subject, Dr. Codman gives the following conclusions:

1. The frequency of X-ray injuries has been much exaggerated by the medical press owing to the wide publicity given to many early cases.

2. The writer has been able to collect somewhat less than two hundred cases, less than half of which were serious, and about one-third of which occurred in X-ray workers.

3. Judging from the experience with these injuries in Boston, it is the writer's opinion that a fair proportion of the severe burns are included in this series, while the dermatitis of skiagraphers is less well represented.

4. At a maximum estimate it is safe to say that not one patient in a thousand has been injured in the past five years by an X-ray examination, and in the past year not one in ten thousand.

5. More than two-thirds of these injuries occurred in the first two years of the use of the X-ray. Only one mild case is reported as occurring in the current year, those cases in which the exposure has been made for therapeutic purposes being excluded.

6. The cause of X-ray injuries is not definitely known. It is some form of energy closely allied to the photographically active X-ray and radiates with it from the platinum terminal.

7. The primary injury is to the nerves controlling the nutrition of the skin.

8. There is no good evidence of injury to the deeper tissues without primary interference with skin.

9. The important factors which contribute to the production of X-ray burns are: the intensity of the current used to stimulate the tube, the quality of the tube, the distance and time of exposure, the idiosyncrasy of the patient.

10. The static machine is somewhat less likely to produce injury than other forms of apparatus.

11. From the data of the reported cases we can say that no burn has been produced by an exposure equal to or less than the equivalent of five minutes at ten inches.

12. It is impossible from the data to say how intense an exposure must be to produce a burn, for a comparison of the cases shows that an inconstant factor or factors exist.

13. These inconstant factors are more likely to lie in the complex human organism than in the less complicated construction of the tube.

14. General experience has shown that soft tubes produce a more intense effect on the tissues than hard.

15. While we cannot control these inconstant factors, therapeutic exposures will continue to be dangerous, and it is therefore important to record the exact conditions of the patient's local and constitutional idiosyncrasies, as well as those of the tube.

16. In cases of injury the time before the appearance of the first symptoms has varied from a few minutes to three weeks. Five cases have remained latent for over three weeks; two of these for five months.

17. It is impossible to predict the severity of the lesion from the time of its appearance after exposure.

18. The writer suggests ten minutes at six inches from the platinum terminal, as a standard therapeutic exposure. This will make comparisons between the inconstant factors easier.

19. Unless signs of dermatitis appear within three weeks after the exposure, they are unlikely to appear at all. In one-third of the reported cases the appearance occurred within the first four days; in one-half the cases before the ninth day.

20. In the ordinary X-ray examination with fluoroscope or skiagraph, the operator takes the entire responsibility of injury; in exposures for therapeutic purposes the patient shares the responsibility.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Catarrhal Otitis Media (Non-Suppurative) as a Factor in the Etiology of Facial Paralysis.—REIK (*Johns Hopkins Hospital Bulletin*, April, 1902) calls attention to what he believes to be a neglected factor in facial paralysis—a factor which is of importance, not only as a means of explaining the etiology and pathology of a large class of cases, but of prime importance in determining the best form of treatment. The author is convinced that in the majority, if not in all cases of facial paralysis of the "refrigeratory or rheumatic class, an acute or subacute otitis media is an intermediary condition between the exposure to cold and the appearance of the paresis. The action of cold in the production of facial paralysis is easily explained when we consider the anatomical relations of this nerve and the frequency of cases in which the nerve, in its passage through the middle ear, is covered only by the mucous membrane of the middle ear cavity; also the great frequency of acute or subacute otitis media following exposure to cold. The usual history of a facial paralysis occurring without any other apparent lesion in an otherwise normal individual is that the patient, having contracted a cold, finds himself four or five days later (often earlier) with a drawn mouth, and soon more or less complete inaction of the facial muscles of one side. He

may not have had prodromic symptoms, but, if he has, these generally consist of a pricking or stinging pain in the ear, with a sense of fullness, slight deafness and tinnitus, following the ordinary symptoms of a cold in the head or sore throat. The ear symptoms are apt to be mild, and sometimes attract little or no attention. The author has observed four cases of facial paralysis in which rapid recovery took place after proper treatment had been directed toward the ear. A brief history of one of the cases is given, viz.:

The patient was first seen on August 29th. Four days previously he had noticed signs of a right facial paralysis; he had had a slight cold in the head, accompanied by some pain, though not severe, in the right ear. There was no earache, but pressure over the mastoid elicited some tenderness. The tympanic membrane was not congested, but there were indications of fluid in the middle ear. A paracentesis was performed, and some serous fluid escaped. A sterile cotton wick was inserted, and this was found to be saturated with serum on the following morning. The mastoid tenderness had disappeared. No organisms were found. On the 29th the paralysis was complete. August 31st he was able to close the upper eyelid, and by September 9th he had regained almost complete control of the facial muscles. The discharge ceased within a few days, and the perforation was almost healed when he left the hospital.

There can be little doubt that this was a case of mild pharyngitis, followed by a subacute otitis media, involving the antrum and other cells in the mastoid as well, which produced paralysis through the effect of the exudate upon the facial nerve in its course through the tympanum. The points which the author wishes particularly to bring out are: *First*.—If exposure to cold, in one way or another, is the cause of most cases of facial paralysis, it probably acts most commonly through the production of an otitis media, whereby the nerve becomes involved either in a direct extension of the inflammatory process to its exposed sheath, or through pressure upon it of an exudate. *Second*.—This being admitted, the form of treatment which offers the most rapid and satisfactory results is a paracentesis of the tympanic membrane to free the cavity of its abnormal contents. *Third*.—We should never, in any case of facial paralysis, neglect to examine the ear.

A Fatal Case of Acute Primary Infectious Pharyngitis with Extreme Leukopenia.—BROWN (*American Medicine*, April 19, 1902) reports a fatal case of acute pharyngitis in a woman aged twenty-nine years. The history and post-mortem findings are given in detail. The patient died, seven days after the onset of the trouble, from edema of the glottis. Blood examinations were made daily. The first count showed 340,000 red corpuscles and 1,000 white per cm., while on the seventh day the number of white cells had fallen as low as 260 cm. At the autopsy no collection of pus could be found, but there was marked decubitus on the posterior surface of the epiglottis and the edema completely closed the glottis. The lymphatic glands were enlarged and the mucous membrane of the posterior wall of the pharynx was greatly inflamed. Cultures made from blood clot on the heart, bone marrow, epiglottis, vocal cord and left kidney showed the staphylococcus pyogenes. The author states that infectious pharyngitis was first described by Senator in 1888, who reported four cases. Since that time the number of reported cases has been small, and the subject has not received the attention that it should.

An Exenteration of the Tympanic Cavity for Acoustic Purposes.—GRADENIGO (*Archiv fuer Ohrenheilkunde*, 55 Band, Heft 1 und 2).—The author, after having removed the tympanic membrane and ossicles in a series of cases of middle ear disease, has reached the following conclusions:

First.—That the results of surgical operations in the middle ear cavity depend on the integrity of the labyrinth.

Second.—The best results are obtained in those cases following a suppurative middle ear trouble, where there is a partial destruction of the drum and the ossicles. Good results are also obtained in a class of cases which are not well understood, but are known from the history alone to follow suppurations of the middle ear cavity, as they do not show any characteristic changes in the drum.

Third.—In the dry form of chronic middle ear inflammation, the results are less satisfactory, but much better results are obtained in the sclerotic cases. This argues against the fact that the labyrinth is more involved in the sclerotic than in the catarrhal cases. The explanation of this is, that no regeneration of a membrane takes place which interferes with the sound waves reaching the labyrinth, as is the case in the chronic catarrhal conditions.

Fourth.—The post-operative treatment has a very important influence as to the definite outcome.

Fifth.—If the deafness has principally the character of a labyrinth affection, operative interference is contraindicated, because the consecutive reaction aggravates the process in the labyrinth.

Sixth.—That the experiences in intratympanic surgery show that our knowledge of the physiology and pathology of the organ of hearing is still very deficient and uncertain.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

A Method for Performing Iridectomy in Aphakial Eyes with Complete Obliteration of the Anterior Chamber.—DESCHAMPS (*Ann. d'Oculistique*, February, 1902).—Descamps describes a method for performing iridectomy which he has devised to meet the conditions obtaining in aphakial eyes with obliteration of the anterior chamber. In such cases where the iris lies directly against Descemet's membrane the operation according to the ordinary method or even the modification of Gayet, is extremely difficult or impossible. Descamps' operation is thus described: A cataract knife is introduced at the limbus corneae, passed into the vitreous *behind* the prolapsed iris and made to emerge at a symmetrical point 4 mm–5 mm. away. The intervening tissues are then cut through. Iridectomy forceps are introduced, the iris seized from behind and separated from the cornea. This procedure is facilitated by gently rubbing the posterior surface of the agglutinated iris. Finally the iris is drawn out through the incision and clipped off.

This method was eminently successful in the two cases reported.

Diabetes and the Eye.—S. B. ALLEN (*N. Y. Med. Jour.*, March 29, 1902).—Nuclear ocular palsy—*i. e.*, ophthalmoplegia externa or interna—may occur as an early expression of diabetic intoxication and is thus important from a diagnostic point of view. The third nerve is the one most frequently affected; more rarely the sixth, the fourth and the facial. When occurring early in the disease these paralyses are apt to be partial, and many clear up. Late paralyses, however, usually persist. Paresis of accommodation in persons under the presbyopic age, and changes in refraction due to alteration in the shape of the globe and lenticular change, should lead to the suspicion of glycosuria. Diabetes is the only toxic condition which causes cataract *per se*. Cataract of diabetic origin is not distinguishable from ordinary senile cataract, but lenticular opacity occurring in young persons and developing rapidly should at once suggest glycosuria.

Diabetic retinitis closely resembles the retinitis of albuminuria, and ophthal-

microscopically the two forms are hardly to be distinguished. Diabetic amblyopia is due to an optic neuritis and presages the onset of coma. A retrobulbar neuritis similar to the picture of a tobacco intoxication, with the presence of central scotoma, occasionally obtains.

The iritis of diabetes is usually plastic; less frequently there is a formation of a moderate hypopyon, which is either resorbed or becomes organized in the pupillary area, thus giving rise in some cases to secondary glaucoma. Ulceration of the cornea in diabetes is a serious complication, and may result in the loss of the eye.

Syphilitic Ulcer of the Eyelid.—W. C. POSEY (*Ophthalm. Record*, March, 1902).—Female, fifty-two years, presented herself with the tissues of the lower lid margin completely destroyed in consequence of an ulcerative process which extended from the junction of the outer and middle third to within 4 mm. of the outer angle. The trouble began at the lower outer margin of the lid as a small lump resembling a hordeolum which eventually inflamed and a small ulcer appeared at the inner part of the lid. The patient had been suffering for five months with a running sore on the head. In view of the necrosis of the skull the case was regarded as of syphilitic origin, and the ocular complication was finally controlled by large doses of mercury and potassium iodide. Worthy of note is the resemblance of the condition in the beginning to an ordinary sty.

A Separate Gumma of the Caruncle and Ocular Conjunctiva.—G. F. SUKER (*Am. Jour. of Ophthalm.*, March, 1902).—The conjunctiva and caruncle are less frequently the seat of ocular gummata than the other tissues of the eye. The literature contains but thirty-five cases of gumma of the conjunctiva, and one case only of gumma of the caruncle. The tumors are small, varying in size from a pea to a bean, and most frequently appear in the bulbar conjunctiva near the upper and lower fornices. A variety of conjunctival gumma is the so-called syphilitic blotch, which occurs as a small circumscribed, slightly elevated area of moderate vascularity. The lesions may occur as early as eighteen months and as late as twenty years after the primary affection, the average being from three to five years. Superficial ulceration is frequent. Many gummata begin near the upper fornix and extend downward accompanied by considerable chemosis. Swelling of the preauricular and submaxillary glands is constant and constitutes the most valuable diagnostic point. The diagnosis is based further on a positive specific history and the success of the therapeutic test.

The case reported is believed to be unique in that there occurred a gumma of the caruncle and a separate gumma of the conjunctiva in the same eye. Under mercurial inunctions and potassium iodide a complete cure was promptly effected.

Visual Tests for Children.—A. E. EWING (*The Am. Jour. of Ophthalm.*, February, 1902).—Although estimation of the refraction in children and illiterates may be approximately realized by objective methods, the acceptability of any given glass for distance can only properly be determined by direct visual tests. In 1885 Ewing designed a series of familiar objects, such as a horse-shoe, a circle, a rocking-chair, a chair, a cross, a square, etc., and has recently supplemented the list by the addition of a teapot, a mug and a heart. The objects are drawn to Snellen's scale of 1' visual angle for the thickness of the line, and 5' for the size of the object, the gradation in size conforming to a series in geometrical progression in the ratio 1:0.7 as compared with the next larger size, or of 1:1.4 as compared with the next smaller size.

BOOK REVIEWS.

THE PRACTICE OF OBSTETRICS BY AMERICAN AUTHORS. Edited by CHARLES JEWETT, M. D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, New York. Second Edition, revised and enlarged. Illustrated with 445 Engravings, 48 of which are in Colors; 36 Colored Plates. Lea Brothers & Co., New York and Philadelphia.

Among the many text-books of obstetrics this book keeps a leading position. The best proof of its popularity is shown by the fact that the first edition was exhausted within two years. Assisted by nineteen collaborators who represent some of our best schools, Jewett gives in this excellent book the best teachings of obstetrics, referring in this second edition to the latest achievements in this branch. The magnitude of the work precludes a detailed synopsis of its contents, and we must limit ourselves to the statement that this work comprises the whole subject in a most complete and satisfactory way. Numerous illustrations, the majority of which are real works of art, enhance greatly the value of the book. The more careful reader, however, is at some places too distinctly impressed by the fact that each chapter is written by a different authority. There are some contradictions. The hypertrophy of the heart during pregnancy stated in one place as a physiological process, is denied in another chapter. There are a great number of repetitions, which, of course, cannot be entirely avoided. While in one chapter pregnancy is counted in calendar months the same is done in another chapter in lunar months. There are some chapters which excel by their brilliancy—*e. g.*, those dealing with the development of the ovum, the anomalies of the pelvis and the puerperal infection. The last one mentioned gives a very complete list of literature, a feature which adopted in the same way by the other collaborators certainly would greatly increase the value of the work as a source of information for the scientific investigator. We will conclude this short review by expressing our sincere belief that Jewett's Practice of Obstetrics in its new enlarged edition will meet the success which it fully deserves.

UEBER DIE AETIOLOGIE DES CARCINOMS MIT BESONDERER BERUECKSICHTIGUNG DER CARCINOME DES SCROTUMS, DER GALLENBLASE UND DES MAGENS. Von DR. GUSTAV FUETTERER. Verlag: J. F. Bergmann, Wiesbaden. G. E. Stechert, New York, agent. 1901. Price, 4 marks.

With the evidence at hand the author of this monograph is not willing to accept the parasitic theory of cancer. He considers the etiology of cancer from every standpoint, and presents interesting cases in support of his views. The work is dedicated to Virchow in honor of his eightieth birthday. The work containing the close observations of a careful observer, is a valuable contribution to the much debated question—the etiology of carcinoma.

DER GEHALT DES MENSCHLICHEN URINS AN STICKSTOFFHALTIGEN KOERPERN. DIE BESTIMMUNG DES OSMOTISCHEN DRUCKS UND DES DISSOCIATIONSGRADES. Fuer Aerzte und Studirende. Dargestellt von Medizinalrath Dr. med. CAMERER. Price, 2 marks Franz Pietzcker, Tuebingen, 1901. G. E. Stechert, New York, agent.

In this little pocket manual of 52 pages the author has included all of the most salient points in the determination of the nitrogenous substances in the urine. He has endeavored to present in an assimilable form his work along this

line for the past decade. The first part deals with the consideration of the nitrogenous substances of the human urine in normal and in various pathological conditions; second, with the determinations of osmotic pressure and the degrees of dissociation.

GRUNDRISS DER INNEREN MEDICIN. Von C. LIEBERMEISTER. Zweite vermehrte Auflage. Franz Pietzcker, Tuebingen, 1901. G. E. Stechert, New York, agent.

Liebermeister's exhaustive work on Special Pathology and Therapeutics in five volumes is well known to all students of medicine. In *this* small volume the author endeavored to and has succeeded in selecting those points which are of the greatest practical interest to the physician. It is truly remarkable how much has been condensed into these 450 pages. There are no charts or illustrations in the work. It is devoted entirely to the definite and concise statement of facts. One feels entirely satisfied after reading a chapter, be it ever so short, that he has gained all of the most salient and practical points concerning the subject in hand. In this edition there have been added chapters on syphilis, the venereal diseases in general, and the most important poisons.

MOSQUITO BRIGADES, AND HOW TO ORGANIZE THEM. By RONALD ROSS, F. R. C. S., D. P. H., F. R. S., Walter Myers Lecturer in Tropical Medicine. Liverpool School of Tropical Medicine; Major Indian Medical Service, Retired. New York: Longmans, Green & Co. London: George Philip & Son. 1902.

This little book deals with the proposition of the extinction of the mosquito, and thereby the prevention of the spread of the mosquito-borne diseases, malaria, yellow fever and elephantiasis. The author is too well known by his excellent work on the mosquito question to need further introduction at the reviewer's hands. He takes up the question of the practical extinction of the mosquito, the culex and the anopheles. He narrates the method of organizing working brigades of men to destroy the native habitations of the culex and anopheles larvæ. The book is a valuable one and should be read by every medical man. Its teachings should be followed by those in charge of our sanitary departments.

Ross demonstrates how easy it is to destroy the mosquito, and he deprecates the apparent apathy with which the British government has received the scientific facts concerning the role of the mosquito in the spread of yellow fever and malaria. He pays tributes most complimentary to the work of the American mosquito brigades in Havana. The book concludes with abstracts of the principal articles written on this subject.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY. Under the general editorial charge of GEO. M. GOULD, M. D. 2 volumes. Medicine, pp. 715; Surgery, pp. 684. W. B. Saunders & Company. 1902.

These excellent volumes, which contain a resume of the progress in medical and surgical science during the year 1901, maintain the high standard of former issues of the publication. Valuable features are the editorial comments by specialists in the different branches of medicine and surgery, numerous well-drawn illustrations, and an excellently arranged index.

MEDICAL BULLETIN OF WASHINGTON UNIVERSITY. Vol. I., No. 1.

This Bulletin will be issued quarterly by the Medical Faculty of Washington University. It is published for the benefit of the alumni of the school, and will contain original communications, clinical reports, department notes and items of personal interest to the graduates.

LEHRBUCH DER TOPOGRAPHISCHEN ANATOMIE, ZUM GEBRAUCH FUER AERZTE UND STUDIERENDE. Von Dr. FR. HERMANN, a. o. Professor der Anatomie an der Universitaet Erlangen. 1. Band: Kopf und Halz, Erste Abtheilung: Kopf Mit 183 Figuren, vorwiegend nach Originalzeichnungen des Verfassers. Leipzig: Verlag von S. Hirzel. 1901. Price, \$4.50. G. E. Stechers, New York, agent.

If the rest of the work, when complete, is of the same high standard as that maintained by the first portion, which lies before us for review, then anatomical literature of German origin will be distinctly richer thereby. The 418 pages are cleanly printed upon fine grained, heavy paper. In fact, the whole is a worthy representative of the modern German publisher's art. Too much cannot be said in praise of the illustration, though it may be remarked that quality rather than quantity seems to have been the author's aim, since there are fewer cuts than one or two recent books on similar subjects contain. Most of the illustrations are original, the proper author being given credit, however, where a copy is made. Hermann explains in his preface that his cuts have been made from photographs that had served as a sort of groundwork for pen-sketches. The idea seems a most commendable one, since in the photograph there is retained all the exactness of proportion, and in the drawing is added the fineness of detail which must necessarily have been lost in trusting to the camera alone. When a cut is intended as schematic, the author always indicates the fact. Whereas, all other illustrations may be regarded, as far as realism is concerned, as works of true art. Too many text-books palm off on the student purely schematic drawings for finished representations of the various parts and organs. The seventeen chapters presented are assigned to the skull, brain, eye, nose, mouth, face, throat and ear, each being subdivided in the way which would most naturally suggest itself.

In many instances the work oversteps the confines of a normal anatomy, and gives us insight into the field of pathological anatomy, thus having the wider surgical application. In discussing the development of the lip, the author does not confine himself to the expected, but illustrates the error which results in the formation of hare-lip. Again, in discussing the base of the skull, we are not restricted to the normal alone, but have given the classic fracture lines through the base. The neurologist, too, finds something beside the ordinary facts which he might await, for in dealing with the anatomy of the pons, Hermann also shows in cuts the site of the lesion in pontine paralysis. The surgeon is aided by having indicated upon the exterior of the skull the lines which lie over the various fissures, so has an aid to localization.

Just how recent the work really is, is indicated by the fact that the author's preface is signed July, 1901; so we get the material just from the press.

Last, but not least, one feature which recommends the book is that it is lavishly supplied with marginal titles—certainly a great aid to one who desires to look up a point without having to read far.

A MANUAL OF DISEASES OF THE NOSE AND THROAT. By CORNELIUS G. COAKLEY, M. D., Professor of Laryngology in the University and Bellevue Hospital Medical College, New York. New (2nd) edition. In one handsome volume of 556 pages, with 103 engravings and four colored plates. Cloth, \$2.75, net. Lea Brothers & Co., Philadelphia and New York. 1901.

The fact that only two years elapsed since the first edition of this manual appeared shows how popular it has been. In revising, the author has added a new chapter on the affections of the upper respiratory tract in the infectious diseases, together with several colored plates and additional illustrations. It is in every way an up-to-date manual and fully meets the requirements of the student and practitioner.

DIE CHIRURGIE IN DER LANDPRAXIS. Kurzgefasstes Nachschlagebuch fuer Praktische Aerzte, von PROF. DR. CARL BAYER. Mit 41 Abbildungen im Text. Dritte vermehrte und verbesserte Auflage. Berlin W. 35. Fischer's Medizin. Buchhandlung, H. Kornfeld. Price, \$1.20. 1901. G. E. Stechert, New York, agent.

This small work is intended, as the name implies, for a ready guide to the man who is not a surgeon in the strictest sense of the word, and more than this, for one who has not the time for the study in detail of larger surgical works. The 246 pages and 41 cuts are devoted to the diagnosis and treatment of all the surgical affections which are likely to confront the practitioner at a distance from hospitals and well-equipped surgeons. In other words, the book is intended to help the man who must help himself, and so does not take those conditions which can be treated at leisure and thus readily await the specialist's pleasure.

After the chapters on sepsis and the other general considerations which are indispensable, come a number which take up, each of them, special subjects, such as hemostasis, tracheotomy, etc., clear down the list to the extraction of foreign bodies from the various body cavities and orifices.

The author's introduction is worth the price of this small book; it consists of a neat little outline of what is expected of the modern surgeon, drawing at the same time a comparative picture of the little that was required of the doctor who antedated anesthetics and antiseptics.

STUDIES IN THE PSYCHOLOGY OF SEX. SEXUAL INVERSION. By HAVELOCK ELLIS. F. A. Davis Co., Philadelphia, Publishers. Extra Cloth, \$2.00. Sold only to Physicians, Lawyers, Advanced Teachers and Scientists.

The peculiarities of sexual life will never cease to interest humanity. This fact is always the pretext for certain publishers to bring, under the pretense of "science," books on the market which have nothing to do with real science and are solely intended to appeal to the morbid longings of laity. No wonder that a physician who is called upon to pass judgment on a book of this character will approach his task with distrust. The greater is his satisfaction when he comes to the conclusion that in this exceptional case his distrust was not justified. This holds true in the book of Havelock Ellis.

The author is well known as a prominent psychologist, and approaches in this capacity the often disputed and never solved question of sexual inversion. He has had a great personal experience in the matter, and is founding his conclusions upon ascertained definite facts. In his opinion, sexual inversion is based upon congenital conditions, upon a certain predisposition. In many individuals this predisposition to inversion may remain latent; in others the instinct is so strong that it forces its own way in spite of all obstacles; in others, again, the predisposition is weaker, and a powerful exciting cause plays the predominant part. In his opinion the school is the great breeding-place of artificial homosexuality. Adoption of the method of co-education of both sexes would be the best preventative. This volume is one of a series of probably five in which the author intends to treat the subject of psychology in sex in its entirety. To those who are seeking information in this striking problem this work may heartily be recommended.

MANUAL OF CHILDBED NURSING, WITH NOTES ON INFANT FEEDING. By CHARLES JEWETT, A. M., M. D., Sc. D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth Edition, Revised and Enlarged. New York: E. B. Treat and Co., 1902.

This manual, originally written for the use of nurses only, is in its present new form adapted to general use. By making all statements in form of con-

densed paragraphs the author was able to deal with the subject of childbed nursing in a very detailed and explicit way within the limit of 80 pages. The value of this little book is vouched by the name of the authors.

PROGRESSIVE MEDICINE, Vol. I., 1902. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 452 pages, 5 illustrations. Per volume \$2.50, by express prepaid to any address. Per annum, in four cloth-bound volumes, \$10.00. Lea Brothers & Co., Philadelphia and New York.

In volume I for 1902 of Progressive Medicine the surgery of the head, neck and chest is considered by C. H. Frazier. The review of the literature on the surgery of the Gasserian ganglion and of the heart deserves special mention. The section on infectious diseases is written by F. A. Packard. Floyd M. Crandall deals with the diseases of children. The section on pathology by Ludwig Hektoen is a summary of the work being done in this science, which underlies every department of medicine and yet with which it is impossible for the clinician to familiarize himself unless studied through some such medium as the present volume. Laryngology and rhinology are written by St. Clair Thomson. R. L. Randolph's section on otology concludes the volume.

These quarterly volumes contain contributions which cover every field of medicine and surgery. They are written by experts who know exactly what is of the greatest value to the practitioner, and these facts easily explain the remarkable success of this publication.

A PRACTICAL GUIDE TO THE ADMINISTRATION OF ANESTHETICS. By R. J. PROBYN-WILLIAMS, M. D., Senior Anesthetist and Instructor in Anesthetics at the London Hospital; Lecturer on Anesthetics at the London Hospital Medical College, etc., etc. London, New York and Bombay: Longmans, Green & Co. 1901.

Of late, in American medical journals, the question of the necessity of special instruction of the medical student in anesthetics has been often and extensively dealt with. While in some colleges the importance of this branch of instruction is properly acknowledged, it is beyond doubt that in general a certain negligence is still prevalent. Here we have a little book that affords to every physician who is called upon to administer anesthetics, and whose instruction has been somewhat deficient in this field, the opportunity of enriching his knowledge.

It is a well-known fact that in no other country on the globe more care and diligence is devoted to the art of narcosis than in England, and this book, written by the "senior anesthetist and instructor of anesthetics at the London Hospital," gives ample proof for this statement. In 200 pages the author supplies the essentials of all the various kinds of narcosis, dwelling upon the characteristics of the various drugs, their indication and fitness for certain conditions, their administration, etc. A special chapter is devoted to local anesthesia. We gladly state that this book is the best on this subject of which we have knowledge.

PEDIATRICS—THE HYGIENE AND MEDICAL TREATMENT OF CHILDREN. By THOMAS MORGAN ROTCH. 3d Edition. J. B. Lippincott & Co., Philadelphia. 1901.

The third edition of Rotch's well-known work in pediatrics has been largely rearranged and almost entirely rewritten. The fact that a medical text-book can run into three editions in six years is, of itself, proof of its worth. As in the other editions, a considerable part of the work is given up to a consideration of the phy-

siology of infancy and childhood, forming a valuable compendium of present knowledge on the subject. With reference to the question of substitute infant feeding, the author is still apparently firmly convinced of the value of laboratory modification of milk. It is, therefore, not surprising that this method of feeding (which owes its inception very largely to Dr. Rotch) should again be given a full exposition. Into the merits of this question it is not necessary to go, suffice it to say that the author's position, though clearly, is nevertheless fairly stated. A distinctive, also a very valuable, feature of the book is its personal, or rather its individual tone. As an exposition of pediatric knowledge of the day, the work in its entirety must certainly be considered as standing in the first rank. The book work itself is fully up to the standard of the publishers, though one cannot help wishing that the colored plates had approximated the natural a little more closely.

SYPHILIS. A SYMPOSIUM. Contributions by Seventeen Distinguished Authorities. 122 pages. Price, \$1.00. E. B. Treat & Co., New York. 1902.

The unanimity of opinion about well-established facts of syphilis, as well as the diversity of conclusions about those less capable of demonstration, are forcibly brought to one's mind upon reading this symposium. It is interesting and instructive, and to the thinker an hour with these authors is refreshing. The chapter on the "Curability of Syphilis" is especially striking from the forcible manner in which facts and fancies are handled.

THE MEDICAL NEWS POCKET FORMULARY FOR 1902. By E. QUIN THORNTON, M. D. Fourth Edition, Revised. Price, \$1.50. Lea Brothers & Co., Philadelphia and New York. 1902.

This little pocket edition is a splendid aid to young physicians who have not yet become sufficiently acquainted with the physiological action, doses and compatibility of drugs to enable them to be guided entirely by the exigencies of the case in hand. For all it is an excellent reference book for popular, palatable and standard formulæ. It contains some 1,700 prescriptions representing the latest and most approved methods of administering remedial agents.

BEITRAEGE ZUR BAUCHCHIRURGIE UNTER BESONDERER BERUECKSICHTIGUNG DER IM LETZTEN JAHRE AUSGEFUHRTEN 84 GALLENSTEINLAPAROTOMIEN. Von Prof. DR. HANS KEHR, OBERARZT DR. BERGER und DR. WELP. Berlin. 1901. Fischer's medicin. Buchhandlung, H. Kornfeld. Price, \$0.90. G. E. Stechert, New York, agent.

The world-wide reputation of Hans Kehr in this line of work is a sufficient guarantee for the quality of this booklet. Probably no other surgeon ever did so much gall-stone surgery as he, hence one cannot fail to profit by what he writes, since he is acknowledged to be the undisputed master of this field, just as Kocher is in the treatment of goitre, Bergmann of brain lesions, or Mikulicz of the surgical affections of the gastro-intestinal tract.

This is in reality a clinical report of the private work done by Prof. Kehr between September 15, 1899, and September 15, 1900, on biliary passages, stomach, intestine and pancreas. There are in addition general chapters on diagnosis, prognosis, treatment, etc. Hence the work is of interest not only to the surgeon and specialist, but to the practitioner as well, on account of the diagnostic work which he is called upon to do.

Cases of no especial interest have, for the sake of brevity, been left out of the report; but everything novel or original has been given in full. The feature of the book which will prove most generally useful is the table in which are con-

sidered the twelve principal affections of the biliary passages; since after each in parallel columns are given in full the symptoms, diagnosis, and proper treatment of each. Kehr wrote the chapter on surgery of the liver, etc., in the "Practische Chirurgie" of v. Bergmann, v. Bruns and v. Mikulicz, and in it made a decided hit by presenting this very table. However, not many physicians are in possession of that large and expensive work, hence it seems commendable that this table has been reproduced in this inexpensive form.

THE JOURNAL OF MEDICAL RESEARCH, April, 1902. This number is the Second Annual Report of the Cancer Committee to the Surgical Department of the Harvard Medical School. Its publication is paid for in large part by the funds of that committee.

This issue contains some very interesting articles which bear on the subject of the so-called parasites of cancer. These articles are abstracted in another place in the present issue (Department of Pathology and Bacteriology).

The volume, like its predecessors, is an impressive and imposing one and reflects credit on American research work.

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